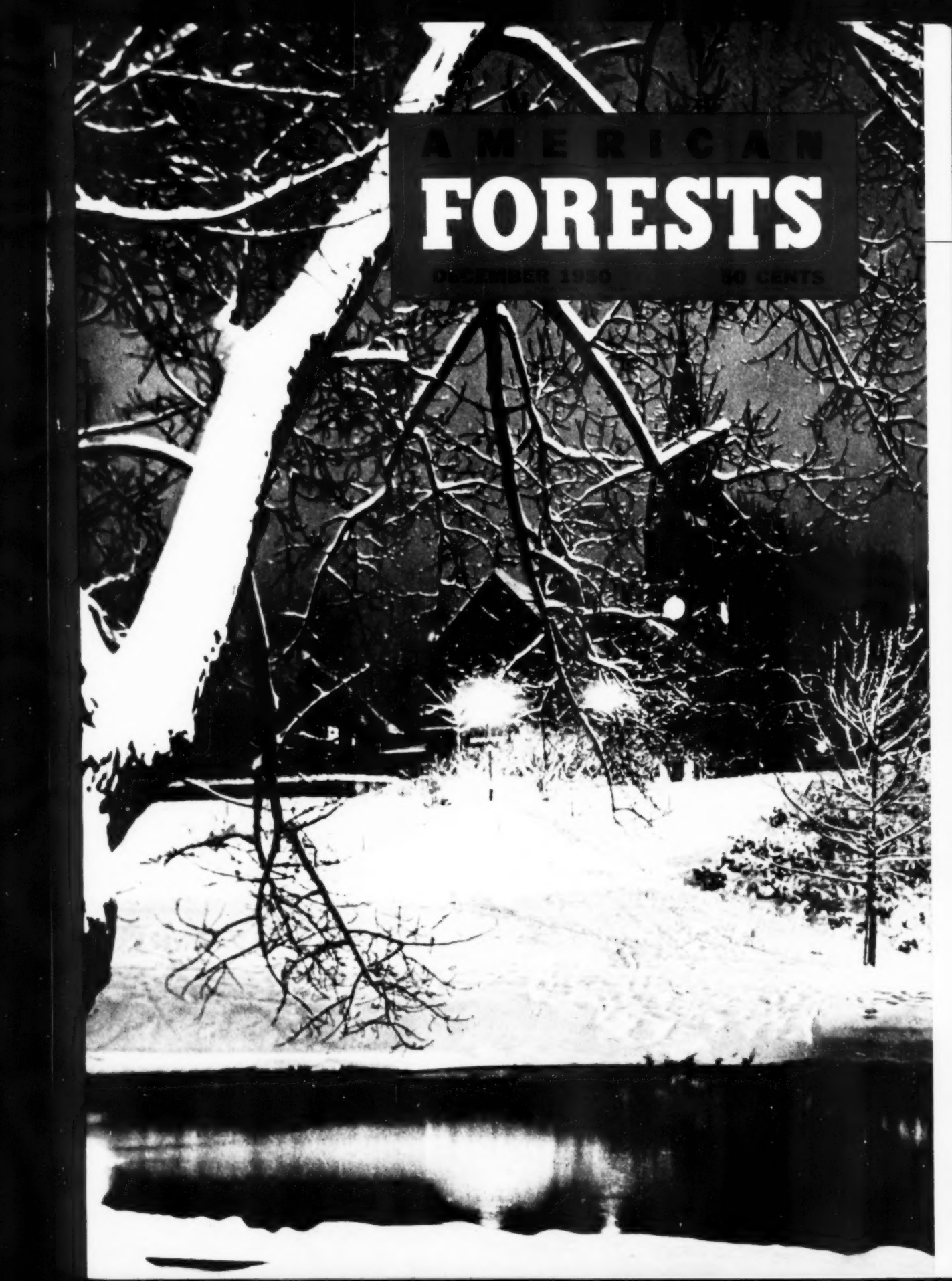
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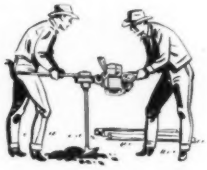

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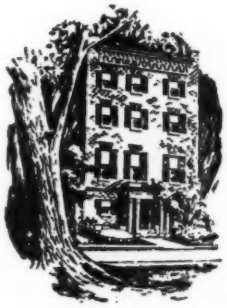
VOLUME 56
NUMBER 12

American FORESTS

PUBLISHED BY THE AMERICAN FORESTRY ASSOCIATION



CONTENTS

SUPERIOR'S PROLIFIC PINES 6
By Charles Elliott

BUGS IN THE LOBLOLLY 9
By Kenneth B. Pomeroy

A HALF CENTURY OF SERVICE 10
By Charles F. Evans

FORESTERS, FAIR 14
By Dorothy M. Martin

THE ROMANCE OF FIREWOOD 16
By Harry Lee Hoffman III

EVERGREENS FOREVER 18
By Charles E. Booth

HARVEST TIME FOR HOLLY 20
By Nelson H. Fritz

WOOD AND YOUR SHOES 22
By Robert Blumenstein

NATIONAL LAND, WATER POLICY URGED 25

WASHINGTON'S STONE WOODPILE 26
By C. Frank Brockman

A BEAUTIFUL MISTAKE 30
By David Hellyer

NEWS IN REVIEW 32

BOOKS 34

THIS MONTH WITH THE AFA 46

EDITORIAL 48

Cover . . . . . .

For December, American Forests *offers a traditional Christmas scene on its cover—the warm and beckoning lights of a church which invite the viewer to join in worshipful observance of the Saviour's birth. From the reader's vantage point, it is easy to look across the placid brook and through snow-laden branches on this still winter evening and feel the urge to join fellow worshipers in well filled pews. We in this country regard such scenes as typically American, but as evidence of its universal nature, credit for this photograph goes to the Norwegians. It portrays the Christmas chimes in Oslo, Norway's capital.*

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75th ANNIVERSARY 1875 1950
THE AMERICAN FORESTRY ASSOCIATION

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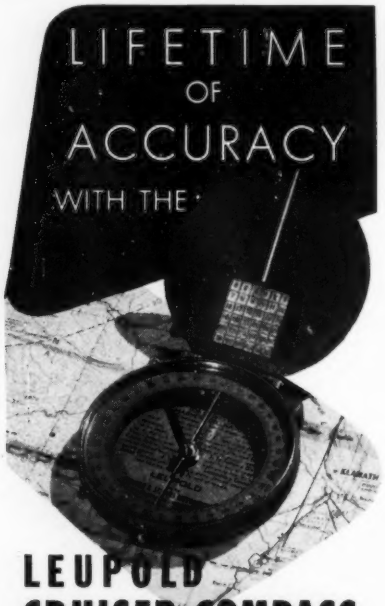

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LETTERS TO THE EDITOR

October Issue Bouquets

Congratulations on the October issue of *American Forests*. This is a most interesting number of the magazine with considerable historical value.

There are few organizations in this country with as splendid a record of unselfish public service as The American Forestry Association, and on the Association's 75th anniversary I am more than ever proud to be a member of it.

Henry Clepper
Executive Secretary
Society of American Foresters
Washington, D. C.

The October number of your *American Forests* was recently received and I have spent most of my spare time since it came feasting my eyes and the eyes of my memory on the wonderful cover picture. I always enjoy your covers but you certainly struck twelve with this one.

I am now living in the West and although I find much to enjoy and admire, autumn always stirs a desire to see my beloved New England hills in their gorgeous attire.

The whole copy is most interesting and gives a fine accounting of your 75 years' work.

Miss Alberta J. Crombie
Tucson, Arizona

You are due congratulations on the October issue of *American Forests*. The cover is beautiful and the contents make it very evident that a tremendous amount of work was expended in their preparation.

A. D. Folweiler, Director
Texas Forest Service
College Station, Texas

I've just received your 75th Anniversary Issue of *American Forests* and it looks to me as though you folks have really done yourselves proud.

Curtis H. Porterfield
American Association of Nurserymen
Washington, D. C.

The 75th Anniversary issue cover made me so homesick for the East I could have cried.

Mrs. William R. L. Conrow
Arroyo Grande, California

The October issue is a beautiful example of printing and color excellence, and the editorial and advertising content are outstanding in quality and volume.

R. L. White
Benton Harbor, Michigan

Oops!

The paragraph under "1885-1886 State Forestry," on page 12 of the October issue, leads me to question whether California had a permanent State Board of Forestry as early as 1885, and to reminisce a bit. The year 1865, as printed, should be 1885.

The Anniversary Issue is a personal reminder that I served as an AFA director under four presidents from 1909 to 1922, so it revives memories of many men and events.

E. A. Sterling
Montrose, Pennsylvania

Industry Deserves Credit

I want to congratulate you on the splendid 75th Anniversary Issue of *American Forests*. It is well conceived, attractively presented, and of permanent value as an important part of the history of forestry and conservation in the United States.

This makes it all the more unfortunate that the caption on your forest fire picture on page 20 is so misleading. Forest fire control in the West was initiated and largely financed through private organizations. They were largely influential in securing the Clarke-McNary Act.

Clyde Martin
Chief Forester
Weyerhaeuser Timber Company
Tacoma, Washington

What's in a Name

In the July issue of *American Forests* you carry an article entitled "Tamarisk: Friend or Foe" which is both interesting and instructive. However, may I point out that the author has assumed the responsibility of proposing for *Tamarix gallica* an entirely new and inappropriate common name, "Russian saltcedar," ignoring the fact that it has been known for at least over a century as French tamarisk (Rehder).

Moreover it is not a "Russian" plant but is "native to the Mediterranian region" (*Rehder*, and *U. S. Forest Service Check List* 1944), or "Western Europe to the Himalayas" (Bailey). Not only Alfred Rehder but L. H. Bailey, the U. S. Forest Service, W. L. Jepson, Kearney and Peebles and other leading botanists all use the long-established common name "French Tamarisk," and naturally *Standardized Plant Names* adopted this appropriate name for *Tamarix gallica*. Nor is this plant related in any way to the Cedar, *Cedrus*, a name, by the way, that has been perpetually misused in a number of genera.

Free-lance, careless or emotional misnaming by amateurs, and selfish and even illegal bestowal of new names for old, established ones by commercialists, have caused and are increasingly causing chaos in the field of common plant nomenclature, one of our most complicated and important plant problems. There are literally hundreds of thousands of common plant names, and there are hundreds of thousands yet to come. The least that interested horticulturists should do is to desist from coining new names for well-established ones.

Years of painstaking labor went into the making of *Standardized Plant Names*. For botanical names the "International Rules of Botanical Nomenclature" were followed as closely as possible; for common names the most universal or appropriate were chosen; for horticultural names the most

GREEN

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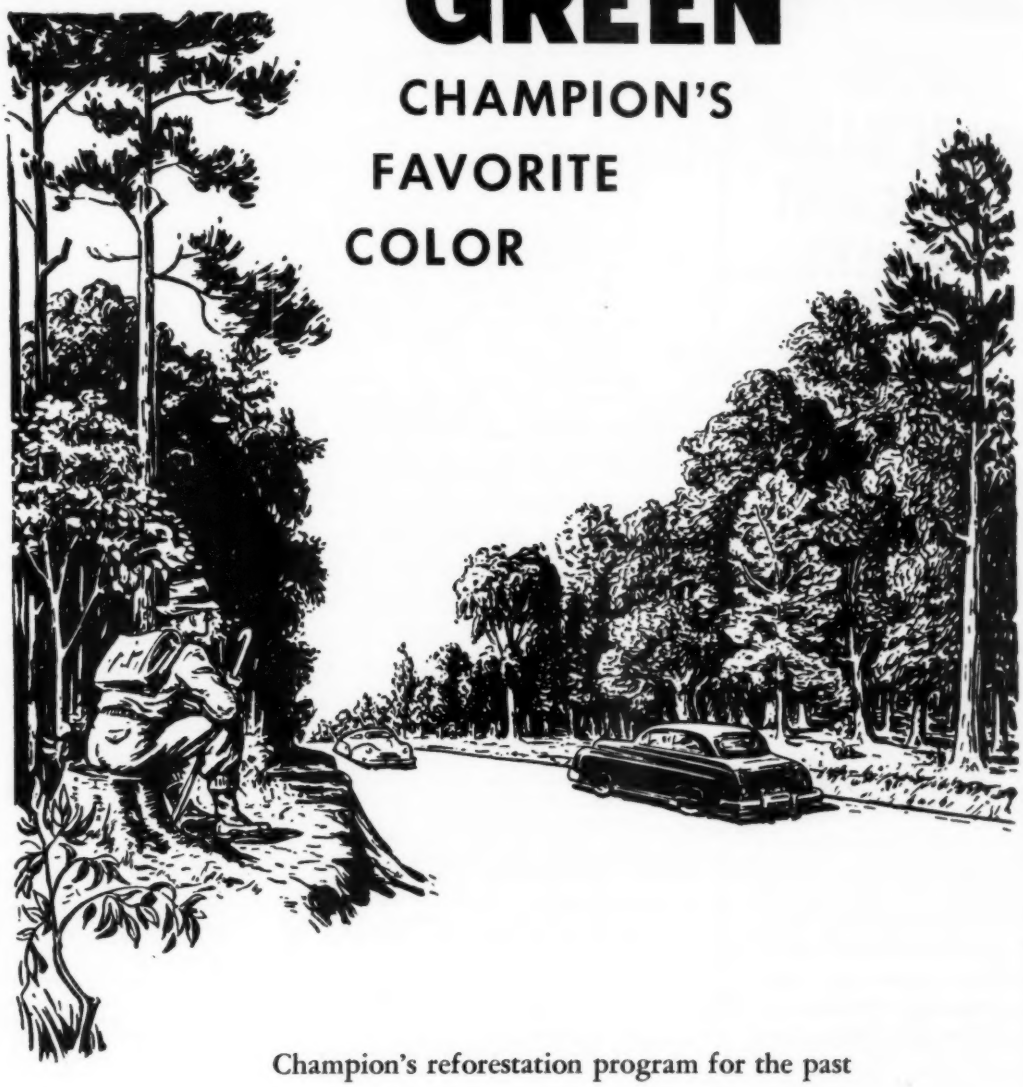

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appropriate in the judgment of the editors were chosen; but the rule was established that *no two species or varieties of plants be given the same name.*

In the preparation of *Standardized Plant Names* the American Joint Committee on Horticultural Nomenclature asked for and received the full cooperation of the U. S. Forest Service, the U. S. Department of Agriculture Committee on Plant Names, the Bureau of Plant Industry, the Arnold Arboretum and other chief arboretums and botanical gardens in the U. S., and over 200 other collaborators and leading plant specialists.

S. P. N. is by no means perfect and a revised and enlarged edition is needed, yet it is conceded to be the best authority yet published on common and horticultural plant names. After all, the most important point is that *some standard be adopted and followed until authentic revisions are made.* The name itself, though very important, is less so than the rule that adopted names be used until agreements are reached as to revisions.

It is hoped that before too long an International Congress will convene to establish rules for bestowing common and horticultural plant names as is the case with botanical names, and it is also hoped that the International Botanical Congress held in Sweden will at least offer some recommendations as to procedure in standardizing non-botanical names.

It is a matter of great regret that the horticultural press of America is so indifferent or careless as to permit correspondents to choose or invent common names at will, ignoring any standards whatsoever, and thus adding to the growing "confusion of tongues" in the plant name world. And this applies also to writers of horticultural and botanical literature.

In botanical and scientific fields, in general, the Latin language is a medium of untold value in establishing rules of plant nomenclature understandable in all nations. There is no universal world language for common names, but instead hundreds of vernaculars; yet the rule of *priority* should be followed where at all possible, and fair translations made of local common names if well established and appropriate.

If the horticultural and botanical press and writers and the leading horticultural organizations of America would agree on reasonable standards and consistently follow them, order would gradually follow the chaos that now exists in non-Latin plant names, and enjoyment and profit in the plant world would be greatly enhanced.

Harlan P. Kelsey

East Boxford, Massachusetts

Indians Have a Grievance

On page 917 of the October 2, 1950 issue of Federal Supplement West Publishing Company, St. Paul 2, Minnesota) there appears the report of the case of Menominee Tribe of Indians versus United States, U.S. Court of Claims, July 10, 1950.

The court held:

"We conclude that the Government has violated the terms and provisions of the Act of 1908 on 20,326 acres as specifically set forth in Findings 33 through 96 for the period from 1910 through 1928 in that there was cut mature green timber not properly designated by the Forest Service of the Department of Agriculture and much immature timber, and that the timber was cut in such a way that the forest has not been preserved or perpetuated and, finally, that there is little prospect of the natural replacement of a valuable forest on these areas within the foreseeable future."

As a reader of your magazine, I felt that the foregoing might be of interest to you.

John C. Oberlin

Cleveland, Ohio

Modern Dance Gets a Vote

I have never liked modern poetry or modern art. They seem so strange and difficult to understand. I dared to read some of the odd mumblings of the new school of poets and remember thinking that no one could understand them but the poets — if they did. Modern art leaves me cold. I can't see why the so-called artists expend so much energy on circles, angles, and blobs of paint.

But I do appreciate modern dance and I liked your "Conservation through Modern Dance" in the September issue. Besides being a very dramatic presentation of conservation's story, it shows that conservation is being given more and more recognition in different fields.

Mrs. R. H. Crandall

Philadelphia, Pennsylvania

Food for Thought

The Eagle River assembly was a very well managed affair, far beyond my expectations, and deserved a nationwide attendance. I wonder what can be done to bring in mass membership to the next one. It deserves serious thought.

Ding Darling

Captiva, Florida

Wisconsin, A Good Example

The trip we took the day I spent at the annual meeting in upper Wisconsin was really an eye-opener to me. With the forestry situation as it is, and the good fire protection that appears to have been established in that part of the country, I am wondering if northern Wisconsin isn't an outstandingly good example of proper land use — which in this instance would be for trees and tourists. We need the trees and our people need to have some place that they can get to for recreation, or else die off from overwork, lack of exercise, and worry — all of which are curable through the out-of-doors process, according to my experience.

H. H. Bennett

Washington, D. C.

He's Agin Hunters

About your friend, the hunter, on the front cover of the November issue of *American Forests.* I am sure it is an affront to Joshua A. Cope by whom you have an article in the same issue and who is no longer alive to voice his sentiments.

It was one of these hunters who in the autumn of 1950, in running out a rabbit in our 20-acre farm woods, ruined an entire acre of woodland before my farm neighbors got the fire under control. Now I always thank the Lord when it rains on the first day of hunting as that lessens the fire risk.

Imre Domonkos

Oberlin, Ohio

KITCHEN ANVIL

EVERYBODY ought to have one. How we got on so long without one I do not know. Our kitchen anvil is a couple of feet off the butt end of a log which measures about fourteen inches across the bottom and just under a foot across the top. The ends were sawed off carefully and square, and the top was planed and scraped to a clean, fresh wood surface. It stands upright, big end down.

It stands in a quiet corner of the kitchen, and might not be noticed from one week to another. But when it is needed no other facility will do.

Have we a cocoanut to break open? Is there a rock-hard frozen piece of meat to cut? Does a resisting hambone need cracking to release the tasty marrow? Is a warty, tough-rinded Hubbard squash scheduled for the dinner table? Anything which requires whacking, hacking, chopping, or bopping that can be done indoors at all is done on our kitchen anvil.

In the first place, its end-grain wooden top makes a nice receiving surface for the cleaver, knife, or ax that we use. The surface isn't much hurt, and the tools aren't dulled.

Its second great virtue is its weight. A solid blow with a heavy knife or a cleaver, or even the hatchet which sometimes is used on tough bones or heavy squashes, is cushioned as the momentum is spent in the heavy weight of the kitchen anvil.

A physicist can explain what happense to the force of such a blow. Whereas a solid impact on the table top—and it's a sturdy table—would make the whole house shiver and shake, an even stronger blow atop the kitchen anvil creates only a dull thud.

If someone wanted to merchandise these, he might put some kind of base under it which would make it surer not to tip over; and he might even cushion it with felt like that used under rugs. And he might bevel the top nicely to help avoid splitting. And he might put a cleaver-hook and rack for large knives along one side. Ours is swamp maple, but more luxurious woods could be used.

I give the idea to readers of this magazine. I don't think you can patent a hunk of log, but you can use it, and therefore, if transportation expense is not too great you could manufacture and merchandise it. Folks who bought them would like them. We like ours.

—Thomas J. Page.

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This 200,000-acre tract in southeast Georgia was a cutover, burned-out blight on the earth 25 years ago. Today it's a model of thriving forest land management. It pays to grow pines

Superior's Prolific Pines

By CHARLES ELLIOTT

DOES it pay to grow trees? Ask W. M. Oettmeier, president and general manager of the Superior Pine Products Company. A graduate of the Penn State Forest School, Bill knows what he's talking about, and having seen some pretty rough action with the Marines in 1918, and with the Air Force in World War II, the two fisted executive will hand it to you straight.

His home is in Fargo, Georgia, approximately in the middle of 220,000 acres of coastal flatland, which have been under his management for almost two decades. And unless you know the miracle of the pine tree, he's likely to come up with some answers that will send you looking for a bundle of nursery seedlings, a planting dibble and some barren acres upon which to start a forest of your own.

The Superior Pine Products forest lies roughly in an expansive block between the eastern rim of the Okefenokee Swamp and the Florida line. It covers a big portion of two Georgia counties, Clinch and Echols, and its quarter century history between its disgrace as a cut-over, burned-out, non-productive blight on the earth's surface, and its crowning achievement of a few months ago, is a story which should be recorded in the annals of American forestry.

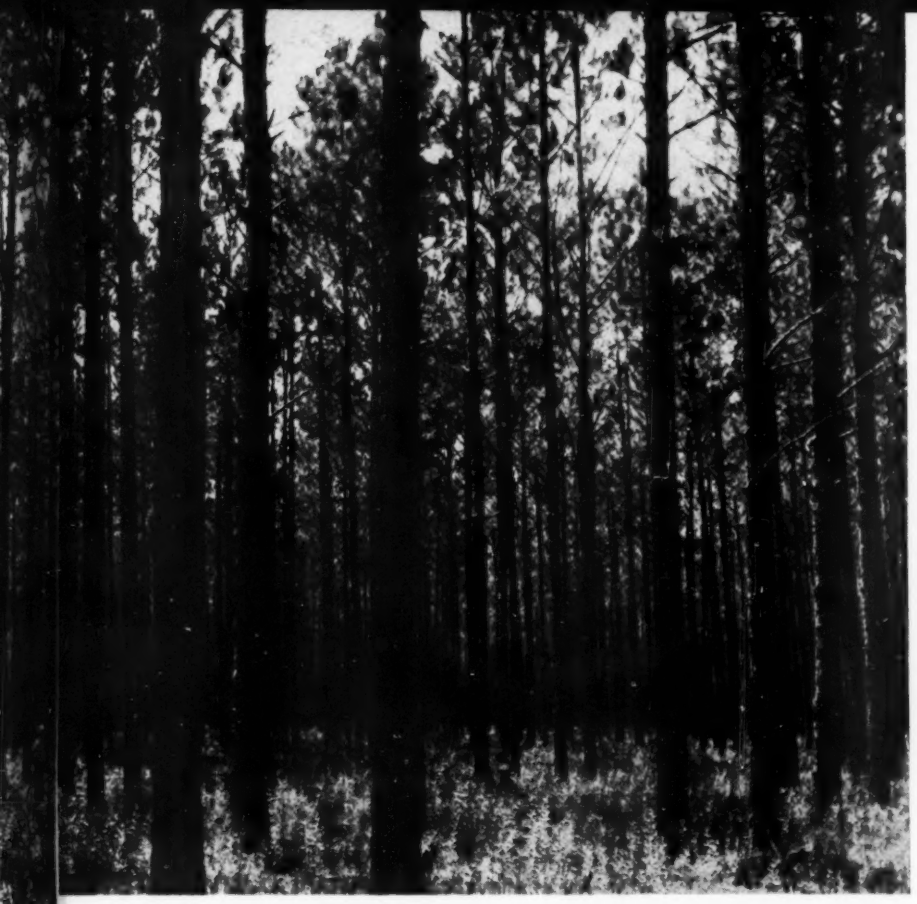
Even in 1926, when a dollar was worth the paper it was printed on, the acquisition of a land area almost one third the size of Rhode Island was not like buying a lot in a lagging real estate development. There were titles to check, lease agreements to settle, turpentine and other rights to acquire. There were the usual stubborn owners who got wind of the big deal and wanted holdup prices for their practically worthless holdings. But all the trades were eventually made, the deals consummated, and the Superior Pine Products Company was launched on one of the most amazing sagas in the history of growing trees for profit.

For the first few years, Bill Oettmeier admits that the red end of the balance scales was piled higher with dollars than the profit side. It is expensive to equip fire trucks, erect towers, plow firebreaks through the woods and plant trees.

"To be perfectly frank," he says, "we didn't put our forest on a paying basis until we quit trying to produce manufactured products such as lumber, rosin and turpentine and went to practicing forestry."

They closed down their sawmills and turpentine stills, and by devoting their attention to such raw products as poles and pulpwood from thinnings, sawlogs from ripe trees and the oleoresin which was sold to nearby distilleries as raw gum, the protected timber began to show dividends. Even in the lean early thirties when the American way of life was having one of its severest tests within this generation, the pine trees were paying their way.

The first manager of the Superior Pine Products Company was Captain I. F. Eldredge. Bill Oettmeier came with him to Fargo in 1926 to help with the purchase of land and in setting up the forestry program. When Eldredge resigned six years later to take over the southern forest survey,



A pine stand, planted in the early 30's, being groomed for sawtimber

Bill stepped very adequately into his shoes.

A remarkable tribute to the diplomacy and managerial ability of both men is the fact that in a land where the Crackers had always burned every foot of the woods in winter and early spring, the company maintained one of the best fire records of a private forest anywhere near its size on the continent.

These Crackers, many of whom live in shacks on a few acres of land and make their living from several hundred head of cattle which are allowed to graze on open range, set fire to the woods for many reasons. One was to control insect pests such as ticks and flies, another was for the destruction of snakes, and most important of all to them, to open the cover for new grass and an earlier grazing season. Many times they burned during the hot, dry weather, when the forest was like a tinder box, rather hoping that the fires they set would be destructive enough to kill the trees and open up the forest crowns to provide more luxuriant grass for their stock.

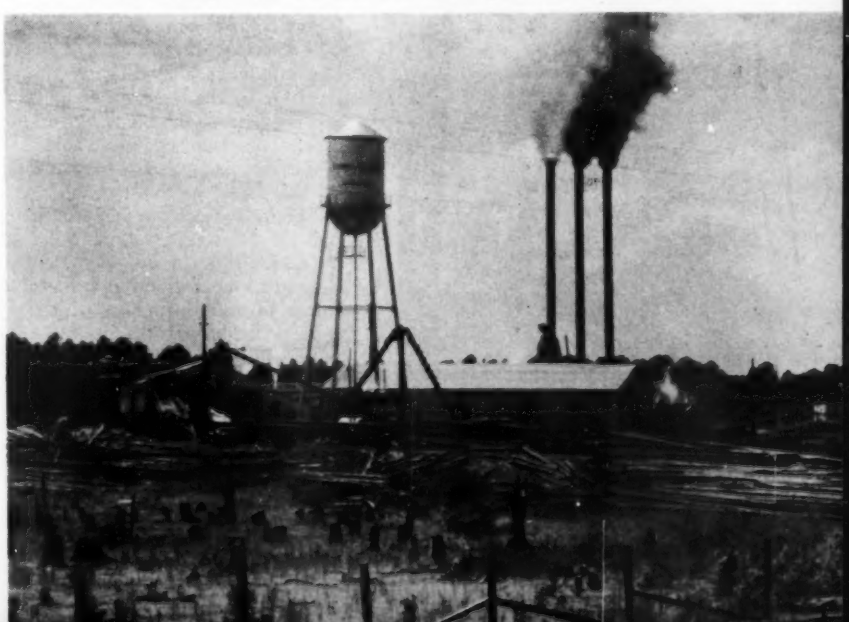
Oettmeier got their cooperation by not only continuing the policy of open range for cattle on his forest, but he inaugurated a system of controlled burning which cleaned out the undergrowth over vast areas within his domain without leaving so much as a smudge on the growing pines. This gave assurance to the local cattle owners that they would be given primary consideration in the establishment of this new forest, and they quickly returned the cooperation by lending their support in the control of destructive forest fires.

But the Superior Pine Products Company did not depend upon the natives alone for fire confrol. Bill Oettmeier and his associates knew what a dry weather conflagration billowing through his young, growing forest could do to his profits. He dipped deep into the till to erect steel lookout towers, equip fire trucks, and plow firebreaks that cut his land into natural sectors to give him an airtight control over unwanted fire in his woods. This private company was the first in the nation to install a two-way radio system in its forest fire control program.

In line with good conservation policies, and hand in hand with its forestry program the company also established controls and management plans for the wildlife on its land. One of the prized tracts on the entire forest was a 40,000-acre game refuge where correct game management practices were installed. The excess predators —wildcats, foxes and skunks—were trapped to a minimum, leaving just enough of the varmints to control the rodents.

Patches of feed were planted for quail, turkey and deer. The game species were brought beyond the carrying capacity of the land and allowed to overflow into other areas which were open for hunting in season and in line with good management practices. Today the regulated site provides some of the finest hunt-

Of interest is the fact that St. Regis built its new sawmill on the site of the original mill which "cut out and got out" 40 years ago



ing of all native species in that section of the state.

In his game program, Oettmeier got help from the local conservation club at Homerville, the county seat of Clinch County. To this club belonged nearly all the males able to chamber a shotgun shell into the breach of a double. With a little encouragement, the hunters and fishermen took the matter of game law enforcement into their own hands. Many of them obtained commissions as deputy game wardens from the state. They talked to their judges and got cooperation from the courts, and some of the stiffest fines in the history of the county were levied for game law infractions.

Then to drive home the unpopularity of game thievery, the club went a step further. Any member convicted for violating the game law was socially ostracized. For two months after his conviction, none of the members would associate with him, or even speak to him on the street. And, in a hospitable little southern town which knows no strangers, that is the blackest blacklist of them all. Game law violations suddenly became as unpopular as the cardinal sins of hog stealing or voting a straight Republican ticket.

Bill Oettmeier dipped deep into the till to erect steel lookout towers

In 1948, sound forestry practices which the Superior Pine Products Company had been following for nearly a quarter of a century, paid off. Bill Oettmeier and his associates reached the ultimate goal in forestry, the crowning achievement for which every successful organization strives. They made a long term lease with the St. Regis Paper Company of New York, for the full scale operation of their properties.

The contract, binding for 60 years, is a masterpiece of mutual benefit. It not only brought to full fruition the years of building a forest by one party, but it guarantees a perpetual timber supply at a reasonable cost to the other.

Probably the most interesting and unusual feature of the contract is the basis upon which the raw wood is taken out of the forest. All forest products, whether they are removed as poles, crossties, lumber or resins, are converted, for the purpose of the lease, into cords. At the time the contract was drawn two years ago, both the owners and the lessees estimated that the Superior Pine Products forest was growing 150,000 cords of wood, or its equivalent, every year. This was set up as a basic figure of payment. St. Regis remits for that amount, whether or not it is cut, on the scale set up by Irving Fisher's Index for raw commodities.

Should both parties agree, or one party prove, that the 220,000-acre forest is producing more than 150,000 cords of wood a year, then that basic figure is increased and must be paid for by the lessee. The operators are not held to the basic figure, however. They may cut more than 150,000 cords, and pay for the surplus at the same rate as the basic.

The latitude of the contract is such that the St. Regis Company decided, on their own, to do away with all turpentine operations and revert the forest to round timber, which they think will increase the production of poles, lumber and other products. When they took over the forest, something like 76 crops, or 760,000 turpentine trees, were being worked. Within the past two years this naval stores operation has been cut in half, with most of the cutting for lumber done to eliminate the turpentine crops altogether and put the forest back to growing round, substantial timber.

Nor is there any rule by which St. Regis must cut—no specified system by which trees must be taken out of the woods. The operation may be clean, or by the selection method. On a clean cut, if natural reproduction does not follow satisfactorily, nature is given a boost by artificial planting. But one strict point to which both parties agreed was that at the expiration of the 60-year contract, the forest must be left in as good or better condition than it was when the lessee took it over.

"They are doing a marvelous job, too," Bill Oettmeier says.

To emphasize his statement, he pointed out the low stumps, which not only save wood, but allow trucks and jeeps to navigate the flat woods. The tree tops are lopped to the ground so they will rot quickly and not form a serious fire hazard. Last year, St. Regis planted back on the land more than 450,000 tree seedlings, the majority of which were slash pine. Most of these seedlings were grown in the company nursery at Pensacola, Florida. Some were purchased from the state.

Under the terms of the contract, the St. Regis Company took over the operation of the forest fire control system. All equipment and personnel, including fire lookouts, truck drivers and fire fighters, were turned over to them. And although the lease did not specify the continuation of the game management policies, the St. Regis officials are maintaining the game preserve, and continue to carry out this phase of conservation started by the Superior Pine Products Company, and which has meant so much to their employees and the community.

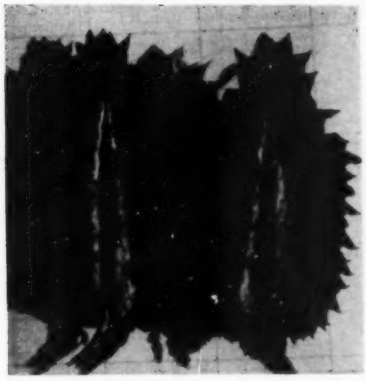
One interesting sidelight Bill Oettmeier pointed out to me was that the present sawmill at Fargo is built on the site of the original mill that "cut out and got out," to use his very pertinent expression. That first mill, which closed down 40 years ago, was followed by a number of smaller "peckerwood" sawmills which slashed everything that would make a two by four, and burned the rest.

The mill today, after a quarter century of intelligent forest management, is cutting as much lumber and taking as much wood out of the forest as the original mill, but on a systematic and far-sighted basis which improves instead of destroying the forest.

BUGS in the Loblolly Pine

Few know it, but cone weevils, moths and similar insects devour half the yearly loblolly pine seed crop

By KENNETH B. POMEROY



Moth larvae tunnel from seed to seed within pith of the loblolly pine cone

WOULD farmers be alarmed if insects consumed one-half their corn?

They certainly would! And they would be concerned over a similar loss of tree seed—if they knew about it.

That's just the point. Few people are aware of the vast quantity of loblolly pine seed being destroyed annually by forest insects. And still fewer have any idea of what this destruction means in terms of idle acres and partially stocked pine stands.

As one farmer exclaimed when shown a grub in a pine cone. "Holy smoke, the boll weevil's got the pine seed!"

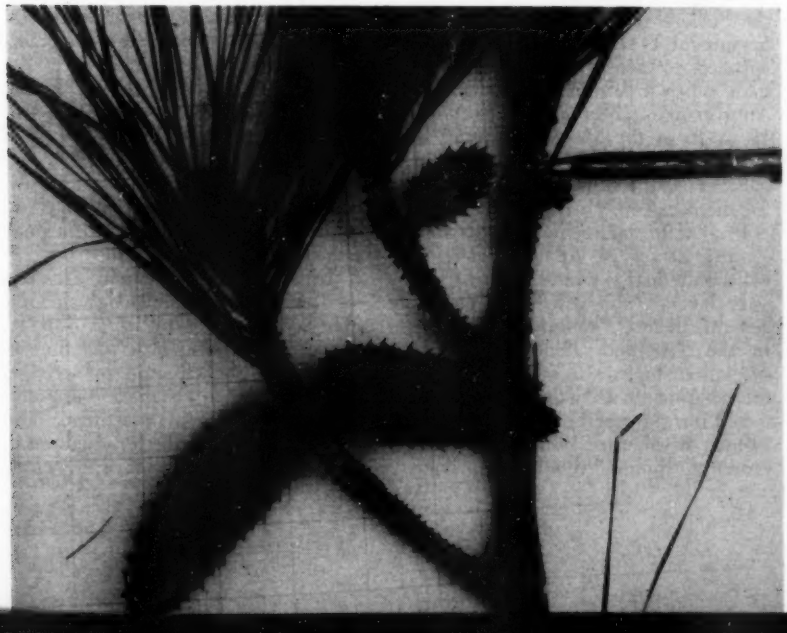
He named the wrong bug. But he certainly had the right idea.

Cone weevils, moths and perhaps other insects are taking their toll of each loblolly pine seed crop produced in the coastal plain of Virginia. In September 1949, members of the Southeastern Forest Experiment Station examined every cone on fifty-six dominant trees in a second-growth stand in Southampton County. Weevils had destroyed twenty-six percent of the cones maturing in 1949, while infesting twenty-nine percent of that season's crop. Five percent of the next year's crop had been ruined. Many other cones were missing but branch scars supplied no clue to the cause. In October mature, uninjured cones were collected from 100 dominant trees in an adjoining stand. But alas, the appearance of soundness was only skin deep for moth larvae, working from within, had consumed twenty-three percent of the ripe seeds.

Observations elsewhere in Virginia and North Carolina disclose similar losses.

Many woodsmen have seen weeviled cones, their dark brown color contrasting sharply with the bright green of healthy, growing cones. Each damaged cone has a hole about the size of a 6d nail through its exterior. The interior of the cone has been eaten and usually contains a mass of frass and pitch. In one stand, weevils completely destroyed eighty-nine percent of the cones they attacked.

Cones are often invaded by weevils before they have had time to develop and mature. The stunted cone indicated by the pencil is a good example



Few people have seen the destruction caused by moths because their grub-like larvae tunnel from seed to seed in the center of mature cones without betraying their presence by entrance holes, discolored areas, or pitch exudations. Very little is known about the habits of these moths but it has been suggested that adults lay their eggs between cone scales, or perhaps young larvae crawl between the scales while still very small. After emerging from the eggs, each larva, and there may be three or four per cone, enters a sound seed and feeds upon the kernel. Damaged seeds usually are cemented to the cone, consequently few empty hulls are dispersed during the season of normal seedfall, and there is little evidence that moth larvae are at work. Although moth larvae rarely eat all the sound seeds in a cone, records maintained on four tracts since 1946 show that from eleven to seventy-eight percent of the mature cones have been infested. The corresponding loss in sound seed ranged from nine to forty-two percent.

The identity of these loblolly pine cone marauders has not been determined because efforts to rear adult insects have been unsuccessful. However, scientists in the Bureau of Entomology and Plant Quarantine, Duke University, and the U. S. Forest Service are at work on the problem. When the habits and life cycles of these insects become known, foresters can estimate their economic importance and decide what control measures, if any, need be applied.

A HALF CENTURY OF PROGRESS

This month the Society of American Foresters is observing its Golden Anniversary. Beginning with Gifford Pinchot, the select membership of this professional body has sought to advance forestry in all branches. Its growth and stature attest to success

By CHARLES F. EVANS
President, Society of American Foresters

ON November 30, 1900, seven young men met in the office of Gifford Pinchot, chief of the Division of Forestry, U. S. Department of Agriculture, Washington, D. C. In addition to Mr. Pinchot there were Edward T. Allen, Henry S. Graves, William L. Hall, Ralph S. Hosmer, Overton W. Price, and Thomas H. Sherrard.

The object of the meeting was to discuss the feasibility of organizing a Society of American Foresters. Two weeks later the same group met again, adopted a constitution, and elected eight additional members. Thus, with a total membership of 15, was launched the organization which has represented the forestry profession during the critical first 50 years of its growth.

From this inauspicious beginning, the Society mushroomed to a membership of 1740 by December, 1930, spiraled to nearly 7000 as of this date. When it convenes for its Golden Anniversary observance December 13 to 16 at the Mayflower Hotel in Washington, D. C., roughly 1000 members and guests will be on hand for the occasion.

Present to commemorate this half century of service to the profession will be the nation's most eminent forestry leaders who will speak on the general theme, "American Forestry in the Twentieth Century." More specialized topics will be presented at the separate ten Division meetings directed toward specific subjects. These include silviculture, education, forest products, public relations, private forestry, forestry economics, forest recreation, range management, forest-wildlife management and watershed management.

Today the affairs of the Society are conducted by the president, vice-president, and nine additional Council members who are elected by the members and hold office for two years. The executive secretary, appointed by the Council, heads a small, salaried staff.

Because foresters found exchange of professional knowledge helpful, the Society early in its growth felt the need to decentralize and thus attain more participation in activities by members too distant and scattered to attend national meetings. This condition led to the gradual establishment and growth of Sections

throughout the country, the first of which was organized in Missoula, Montana, in 1912.

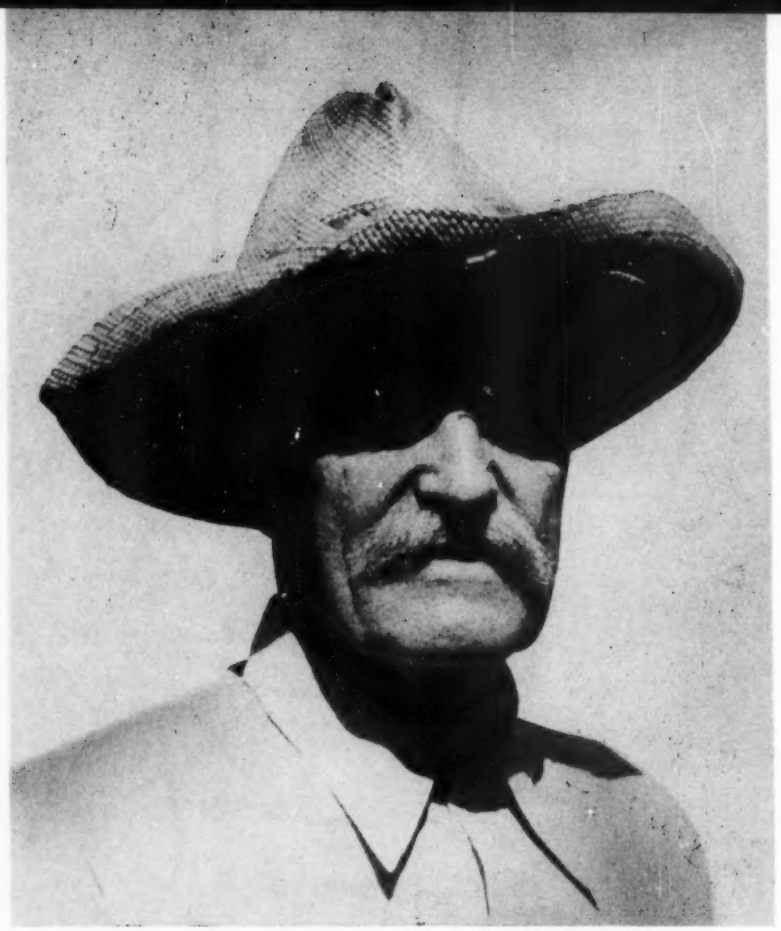
A Section consists of all members in a large area, usually one or more states. Each elects its own officers and holds annual and other periodic meetings. The largest Sections now have more than 500 members and some of their annual meetings have several hundred in attendance.

But decentralization was to go even further. Expansion of forestry with diversification of professional work during the past ten years has led to a desire by many members to meet locally, informally, and more frequently. Some Section territories are so large that travel time and expense were a bar to the frequent meetings desired by many members. To meet this need, Chapters have been organized within the Sections. At present, 21 Sections and 56 Chapters have been established covering the United States and adjacent portions of Canada.

One of the Society's big jobs is to maintain membership interest in professional affairs through wide participation in Society activities. This is accomplished in part by committee assignments. The Society has 25 committees, requiring the services of 250 members, all with definite jobs to be done. The 21 Sections and 56 Chapters make use of nearly 1000 members as officers and local committeemen. The ten subject Divisions utilize another 100 members as officers and committees. Finally, the *Journal's* editorial board of 15 and the Council of 11 swell the total of members playing active roles in professional affairs to more than 1300, nearly 20 percent of the total membership.

Being a representative body, the Council speaks for the membership in establishing operating policies and in conducting the business of the Society. Since the Society is regionally divided into Sections, the Council benefits from the advice of these groups. Official delegates of the Sections meet jointly with the Council at the time of the annual meeting.

As stated in the constitution, the objects of the Society are "to represent, advance, and protect the interests and standards of the profession of forestry, to provide a medium for exchange of professional



Gifford Pinchot in an informal pose. A founder of the S.A.F., he remained active in the profession until his death in 1948

thought, and to promote the science, practice, and standards of forestry in America."

Thus, the Society's principal function is to advance forestry in all its branches. Through its publications it disseminates technical information to foresters everywhere. Through its meetings it promotes cooperation and fellowship among foresters and workers in allied fields. Through their Society membership, foresters unite to increase scientific knowledge about forestry. The Society is the organization through which practicing foresters express views of the profession and help shape policies and techniques of forestry in America.

Individual members who have viewpoints to present are encouraged to express their opinions for publication in the *Journal of Forestry*, the Society's official organ.

On important and controversial issues, still another means of determining membership opinion is available. This is the referendum by which members can express their individual judgments, and after which the Council upholds the decision of the majority.

A recent referendum on federal regulation of timber cutting on private land showed that 70 percent of those voting opposed such regulation. However, a referendum held in 1944 endorsed in principle public regulation to the extent necessary in each local situation to prevent destruction of forests and to keep forest lands reasonably productive. Public regulation in this case can be considered to mean that which operates under state or local statutes.

Standards for the forestry profession are now clearly set forth in a Code of Ethics which consists of twenty-five rules of conduct. Its purpose is "to formulate guiding principles of professional conduct for foresters in their relations with each other, with their employers, and with the public." It was approved by referendum vote of the Society members in 1948. Copies of the Code may be obtained without charge on request to the Society of American Foresters, Mills Building, Washington 6, D. C.

The *Journal of Forestry*, with a monthly circulation of 8500 copies, is one of the world's well-known professional forestry magazines. It publishes technical articles on all phases of forestry and related fields of resource management and utilization and is edited by an editorial board of distinguished specialists.

In addition to the *Journal*, the Society publishes occasional books and bulletins on technical and professional subjects. Published during the past year was *Forestry Terminology*, a glossary of technical terms. Another was *Fifty Years of Forestry in the United States*, published in connection with the Society's 50th anniversary.

A work in progress, now being compiled by 20 special subject matter committees, is the *Foresters' Field Manual*, planned for publication in 1951. Similar to handbooks used by engineers, this manual will be the first book of its nature prepared especially for foresters and forest workers.

Many accomplishments by the Society of American Foresters have come about through its cooperation with other professional and scientific organizations. For example, the Society has long been affiliated with the National Research Council. In 1947 a joint committee of the Research Council and the Society brought out the book, *Problems and Progress of Forestry in the United States*, an analysis of the forestry situation following World War II.

A currently important cooperative project is being carried on by the Society jointly with the American Institute of Biological Sciences to obtain voluntary registration of the nation's professional and scientific personnel working in the biological sciences. Undertaken at the request of the National Security Resources Board, this roster of biologists will be available for either civilian or military use in case of emergency mobilization of technical manpower.

Another interesting example of professional cooperation is the work of a joint committee of the Society of American Foresters and the American Society of Mechanical Engineers. The engineers are helping the foresters to improve the design and efficiency of equipment and machinery used in forest fire control.

Recently the Society, in cooperation with the Charles Lathrop Pack Forestry Foundation, completed a study of state forestry administration. Intensive surveys were made of the legislative, administrative, fiscal, and technical methods used to supervise forestry programs in ten selected states. Reports, channeled direct to the governors, contained recommendations for improving the efficiency

of the states' handling of forest resource. Many of the recommendations have been put into effect.

A half century ago the words "forestry" and "forester" existed largely in the dictionary. Less than a dozen American citizens had received professional forestry instruction. Forestry education was in its infancy, though two institutions had started offering courses in 1898—Cornell University and the Biltmore Forest School in North Carolina; and in 1900 the universities of Yale and Minnesota began their instruction.

On Mr. Pinchot's appointment as head of the old Division of Forestry in 1899, he had under him two technical foresters and nine other employees. Technicians were needed, and to fill the demand until forestry schools could train them, the Division recruited what were known as student assistants—young college and university men with an aptitude for forestry who were given practical field experience to supplement their studies.

This plan worked well. In 1900 there were 232 applications for student assistantships; 61 were appointed, organized into field parties, and paid $25 per month and expenses. From these student assistants the forestry profession later obtained many of its leaders.

The small group working in the Division of Forestry (now the U. S. Forest Serive) comprised most of the foresters in the country, except for the few men teaching in the recently established forestry schools. Although practically no jobs were open to foresters outside the federal service and teaching, the founders of the profession optimistically expected early and widespread adoption of good forestry practices. My own decision, in 1907, to enter the forestry profession was due to the influence of E. M. Griffith, then state forester of Wisconsin. He was one of the 15 members of the Society in December, 1900.

The first technically trained forester to graduate from an American school was the late Ralph C. Bryant, who came out of Cornell in 1900, the only forester graduated that year. During the following decade there were 475 degrees awarded. By the period of the first world war there were 20 schools of forestry offering instruction to young Americans ambitious to enter this new profession.

The kind of training most useful for a career in forestry had been debated by forestry educators and leaders of the profession at many a meeting of the Society of American Foresters. Fortunately, a study of forestry education was made possible by a grant to the Society of $30,000 by the Carnegie Corporation of New York. In 1929 Henry S. Graves of Yale and Cedric H. Guise of Cornell started an investigation which resulted in the book *Forest Education*, published in 1932.

This exhaustive study served as the basis for the next step—grading the schools. In 1933, Professor H. H. Chapman of Yale undertook the job of establishing the standards of forestry education. His work resulted in the accrediting of 14 schools, by the Society's Council, with six additional institutions listed for approval provided improvements were made. With this action by the Soviety, forestry education in America began to accept and operate under the principle of accrediting.

As of December, 1950, 22 colleges and universities are accredited for forestry. During the past year a reexamination of all professional schools of forestry has been made, and a new list of accredited schools will be issued by the Society in 1951.

It is interesting to note that since the first degree was given in 1900, the nation's schools of forestry have awarded some 17,500 bachelor's and 3000 master's degrees. Approximately 2300 bachelor's degrees were awarded in 1950.

As nearly as can be estimated by the Society, there are about 12,500 foresters employed in forestry and in closely allied fields in the United States. The allied fields include range management, wildlife management, wood utilization and manufacture, and similar related vocations.

Some 30 federal agencies employ a total of approximately 3500 foresters. The Forest Service in the Department of Agriculture has the most. The Soil Conservation Service and other bureaus in the same Department employ several hundred, and so do the following agencies in the Department of the Interior: Bureau of Indian Affairs, Bureau of Land Management, Fish and Wildlife Service, and National Park Service.

Nearly 2500 foresters are employed by state and county agencies; and approximately 600 are on the staffs of colleges and universities engaged in teaching, research, and extension activities.

Many timberland owners are finding that the services of professional foresters are of great value to them. Nearly 4000 foresters are now employed by the forest products industries and other private woodland owners. Technical and trade associations employ nearly 200 foresters.

More than 250 are in business as consultants to timberland owners. By making management plans, selecting trees for harvest, and advising owners regarding markets, consulting foresters are filling the growing demand for technical woods management. A list of consulting foresters is published and distributed annually by the Society of American Foresters as a free public service.

(*Turn to page* 33)

Yale forestry, long accredited by the Society, was first taught in Marsh Hall

Joye Smith clips grass for Colorado forage yield study

FORESTERS, Fair

Forestry is regarded as a man's domain. Yet 28 women since 1915 have invaded its professional ranks and 16 are now employed. Here's how they fared

By DOROTHY M. MARTIN

THE Society of American Foresters is growing up, and the proof is its mighty keen interest in the girls.

When the foresters gather in Washington, D. C., December 13, to observe their fiftieth anniversary, the membership rolls will reveal 16 distinctly feminine names in the long list of 6800. Six of these "pistillate" members, as they are known in the Society, are bona fide voting members of the organization, qualified by professional training and experience; the other ten are associate members. These rouge-and-lipstick foresters are no mere spectators in a masculine organization; they have won the approbation of the men, hold office in the Society sections, and serve on important committees.

A complete list of women with forestry degrees would show only 28 names — fifty years of professional forestry and half that number of feminine foresters. The record is not exactly imposing, but there have been accomplishments.

Time was when forestry schools barred females from their halls because summer camp was a required course for graduation. Sage old deans, probably remembering the days of their youth, believed that young women in the woods would distract young men from a serious perusal of practical silviculture. Today no schools bar girls outright from forestry courses. Like Penn State, however, many explain to would-be female foresters that there are complications in their enrollment and point to the record to prove that forestry is a man's world. No girl has ever been graduated from their forestry school.

The director of the Division of Conservation at Michigan State College says that he always tells women they are welcome and within their legal right, but he points out the handicaps a girl encounters. He admits that he must have been vivid in the latter — none of the inquirers have ever registered. Minnesota, too, uses the same technique, but with a constructive addition. Girls are urged to enter the university college designed for special students. In this school they can take all the forestry courses, do not have to fill the summer camp requisite, and can still get a degree. One such female forester worked for some time with the Soil Conservation Service on the shelterbelt project in the Middle West. Another went home to manage a large

timber tract in Georgia.

Two years ago Utah State Agricultural College would not accept girls on the basis of the summer camp requisite. Today they say they would not bar the girls, but "The young woman must show serious interest." No girl apparently has ever been able to prove it.

Most schools excuse their attitude on the grounds that powder puff foresters have a hard time finding employment after graduation. They feel that getting a forestry degree does not harm the girls. In fact, such courses make for better secretaries, statisticians, librarians, general forestry assistants, and foresters' wives. What the schools and the foresters themselves are leery of is the starry-eyed romanticist who visualizes herself riding the range by day and sleeping beneath the stars by night. The level-headed girl, willing to work behind polished mahogany on charts and figures and willing to accept the limitations that lack of field experience imposes, may carve an interesting and worthwhile career for herself.

Back when the Society was founded by Gifford Pinchot and six charter members, forestry was a man's world. The very nature of the work made it so. Foresters of the early days led a rugged existence. They set forth about the first of June to mark boundaries in the high country of the West, not returning until snow drove them from the mountains in the early fall. With a cook, a help-

(*Turn to page* 36)

Lee Prater, USFS

Frances Flick is well versed in forestry bibliographies and references at the U. S. Department of Agriculture Library

Only firewood has enough mystery to warm the soul as well as the body. A poet wouldn't write a sonnet to a stubborn clinker. True, a fireplace can be exasperating, but here are some helpful hints

The Romance of Firewood

By HARRY LEE HOFFMAN III

HAVE you ever joined the family gathering on a cold winter night to toast marshmallows by the cheery glow of clinkers in the furnace? Have you ever seen Fido basking in the warmth from the pilot light of the hot water heater? Have you ever heard of the young suitor who proposed while he fiddled with an eccentric thermostat? Not if the fireplace was going in the living room!

Any poet knows that a sonnet to a stubborn clinker, or an ode to an eccentric thermostat, wouldn't be as effective as a song to the open fireside. For the same reason, the romance-starved owner of an oil burner turns to the hearth fire. Of all the fuels, there's no fuel like an old fuel, for only firewood has enough mystery to warm the soul as well as the body.

But, what about people who fail to find that vaunted romance by the fireside? People who are plagued by a smoking fireplace, and are driven outside into fresh but uncomfortably chilly air, who each year are victims of a back-breaking lug from woodpile to living room. Instead of basking before a cheerful blaze, they huddle before logs which sputter and steam. These unfortunates steam a little themselves, and say, "This is absolutely the last year," or, "Never again . . ." The next winter, however, finds them struggling once more, hoping that the romantic flame in their souls will soon be kindled by a real flame in their fireplaces.

If you are one of those frustrated log fire poets, if you find yourself envying neighbor Jones and his crackling fire, stop and think. Maybe the fault is yours, not the fire's! Maybe you don't really know how to build a fire.

There are several things you can do to improve a dismal situation by your own hearth. First, make sure that you are not burning green wood. Unseasoned wood will clog the flue with tars and resins, cutting down the draft. It is also hard on your sacroiliac, because the extra water makes it one third heavier than seasoned wood. And if you do have dry wood, a year old or more, keep it under shelter, because Mother Nature can temporarily ruin it with a few rainstorms. Then, most of the heat energy will be used for evaporation of water, not for the warming of your house. If no shelter is available, cover the stack of wood with a tarpaulin or strips of roofing paper. Leave the sides of the stack uncovered to aid air circulation and add the rustic appearance of the woodpile to your home.

The standard firewood length is two feet, but fireplaces are not always standard. To determine the correct length, order wood several inches shorter than the width of your fireplace at the back. The wood should be of variable size, with some yule logs thrown in. The longer burning yule logs will keep you from running out to the woodpile every few minutes. The best species of fireplace wood are oak, which burns slowly with a hot fire; chestnut, a ready burning wood; pine, which yields a hot fire and a pleasing aroma; and hickory, a select, almost unobtainable wood.

If you find that your wood is in good condition, and the fire still won't burn, go outside and look at the chimney. If it doesn't rise several feet above the peak of the roof, the draft in the flue will be reduced; in fact, it might even be reversed. Draft is caused by the rush of wind across the top of the chimney, creating a partial vacuum in the flue. Hence, if the chimney is too close to the roof, there is less draft.

One man found a convenient solution for the problem of the too-short chimney. He knocked the bottoms out of several cardboard cartons, climbed a ladder to the roof, and raised his flue to the desired height. After his fireplace was roaring briskly he settled into his easy chair to enjoy the evening. Minutes later, however, he was rudely awakened by the clang of fire engines and discovered that his makeshift chimney had become, momentarily, a flaming torch.

The best solution for this predicament is to contact a builder who will raise the top of the chimney with substantial material.

A poorly constructed fireplace presents a more serious problem than the too-short chimney, but a competent builder also can correct this trouble at a reasonable cost. Here are some things to look for: What is the shape of your fireplace? It should be as deep as it is high, and half again as wide at the front. The back should be smaller than the front, and should slant toward the room, producing better radiation of heat. Are there any obstructions where the fireplace enters the chimney? They will be additional contributors to fireplace smoke and reduced draft. Is your furnace thermostat close to the hearth? If so, the rest of the house will be cooled off while the fireplace is going.

But wait—even with dry wood and a perfect chimney and fireplace, the fire can remain dormant. If that is

(*Turn to page* 43)

Photo by Harold M. Lambert Studios

Evergreens Forever

There'll always be a supply of evergreens to give us Christmas cheer. The yearly harvest of 21 million is a mere thinning operation

By CHARLES E. BOOTH

THE gaily decorated Christmas tree that brings joy and cheer into our homes each Yuletide was once forbidden in the White House in Washington.

President Theodore Roosevelt, who was a great lover of wildlife, forbade the use of the trees because he thought the practice of cutting young evergreens was wasteful. However, that order was short-lived. One Christmas, two of Roosevelt's sons were caught trying to smuggle a tree into the White House. When their father became furious at the attempt, the sons appealed to Gifford Pinchot, one of Roosevelt's closest friends and America's first professional forester.

Pinchot immediately talked to the President and explained the value of cutting small evergreen trees in the forests. He pointed out the fact that when trees were properly cut, the procedure actually helped the forest. The president listened intently to Pinchot's story, realized there was a great deal of truth in it, and abolished his former theory on the subject of evergreens.

The thinning-out of small evergreens helps to produce more of the mature ones. A stand of five or ten thousand trees an acre will generally produce only a few hundred mature trees which can be used commercially as lumber. Therefore, to insure proper root growth for the larger trees, the smaller may be cut without any harm to the forest. A great many of the small trees cut for Christmas trees would eventually be eliminated by nature anyway during the eternal struggle for forest space.

Last year, some 21 million evergreens were harvested in this country for the Christmas season. Half

During a big scale harvest, barge-type drays loaded with 3000 select spruce Christmas trees each are hauled from the forest
Photo by Caterpillar Tractor Co.

The black spruce destined for more particular buyers of Christmas trees are expertly scaled down to desired size before being shipped

of them were raised on farms specializing in the growing of Christmas trees, nine-tenths being obtained from private timberlands.

In addition to the huge American harvest, foreign countries export some five million evergreens annually, the majority coming from Canada.

Aside from providing American homes with a fragrant smell, Christmas trees represent a fifty-million-dollar business which takes place during the short period of approximately three months.

Actually, in some mammoth harvesting and marketing operations which supply upward of a million and one-half Yule trees each season, activity is begun as early as March for the December trade. For example, Halvorson Trees of Duluth, Minnesota has cutters at work in March, April and May, then skip June and July because of possible damage to tender new growth. Work is resumed in August, September and October, for by November it is usually so cold that branches and needles of the spruce in which this company specializes become too brittle for safe handling.

Then the trees are taken to Duluth where they are processed and neatly trimmed on the butt ends. Next they are dipped into huge paint vats where they are dyed green, silver or white, after which they are dipped in a solution which helps them hold their needles and keep a fresh appearance through the holiday season. Until shipping time they are kept in cold storage at 28 degrees.

The Halvorson Trees stand only about 40 inches tall, and are cut from the stumps of felled black spruce which are often 60 or more years old and have a height of 35 feet and a diameter of only four inches. They are found in several million acres of swampland which badly needs thinning so that good grade pulpwood can find room to emerge.

The harvest of boughs, too, is both a profitable pre-Christmas business and a means of assuring better quality future lumber through the pruning of lower limbs. The boughs are baled in the woods into bundles of about 50 pounds each, then loaded onto trucks and hauled to nearby towns for shipment. In some instances boughs are made up into wreaths before shipment to city markets, but more often florists at the destination make up their own decorations.

Selection of the Christmas tree is a serious ritual in most American households. Like so many other purchases, different individual tastes and dislikes are evident. The tree's size, shape, fragrance, tint and ability to retain its freshness is carefully considered, and price, too, is an important factor.

Although often disputed, the balsam fir, *Albies balsamea*, seemingly remains the "king" of the Christmas trees. Hailing from the northeastern part of the United States, and New England in particular, about six and one-half million of these trees are sold each year. Besides being exceptionally fragrant, the balsam fir has an attractive form, being well-shaped and having dense foliage. Because this species holds its needles so well in warm homes, it seems to have been especially created for the Christmas holiday. Many so-called "pine

(*Turn to page* 29)

A prettily decorated tree provides the perfect setting for a wide-eyed child's Christmas morn

Harvest Time For Holly

This deformed holly bears mute evidence of many a hacker's ax

By NELSON H. FRITZ

WAVES pounded the New England coastline when, on December 21, 1620, the Pilgrims landed at Plymouth. Before them stretched vast, virgin forests resplendent with trees of the new world. They were perhaps awed by the tall stately white pines, captivated by the graceful hemlocks interspersed with the white-barked birch and made to feel at home by a tree with spiney, dark-green leaves and bright red berries, the American holly.

It is safe to assume that the Pilgrims were acquainted with the holly, for its use as a decoration at Christmas had come down to them through the centuries from the time when early, continental European tribes decorated their homes with the berry laden branches at the "turning of the sun," the feast of Saturnalia. Possibly they had heard how the Celts used holly at "Yuletide," the celebration in honor of the sun god, Yaioul.

To these Pilgrims, what could have been a more welcome or significant sight, four days before Christmas, than these dark-green, spiney-leaved, red-berried trees of the forest—American holly?

In 1620 and for many years thereafter, the natural range of American holly extended from the coast of what is now Massachusetts south to

Landscape architects have a high regard for holly as an ornamental

In proper harvesting technique, cutting is at the lateral branch

Young trees, hacked indiscriminately, never reach maturity

The author demonstrates how high branches of holly are pole pruned

The range and quantity of holly are less extensive than when our pilgrim fathers landed. But there's plenty for many a Christmas if harvested properly

Florida, westward into southern Indiana, down the Mississippi River Valley, through Missouri, Arkansas, Oklahoma, Louisiana and eastern Texas. Today the tree is fast disappearing from its original range. Exploitation and vandalistic harvesting methods have reduced its growing area to a few states along the Atlantic seaboard.

Most of the holly of commerce today comes from Delaware, Maryland, Virginia and North Carolina. Only within the past decade have garden clubs, state forestry departments and other interested groups become cognizant of the fact that the country's supply of holly was being depleted. Now attempts to conserve the species throughout its range are being made.

Maryland took the first step in 1936 when its State Forestry Department in cooperation with local garden clubs instigated a program for "certified holly." Through demonstrations of proper harvesting methods, farmers, woodland owners and others were instructed in the removal of the berry-bearing branches. Lateral pruning with shears and pole-clips replaced the former promiscuous hacking with hatchets, corn knives and saws. No tree was completely stripped of its full crop of berries.

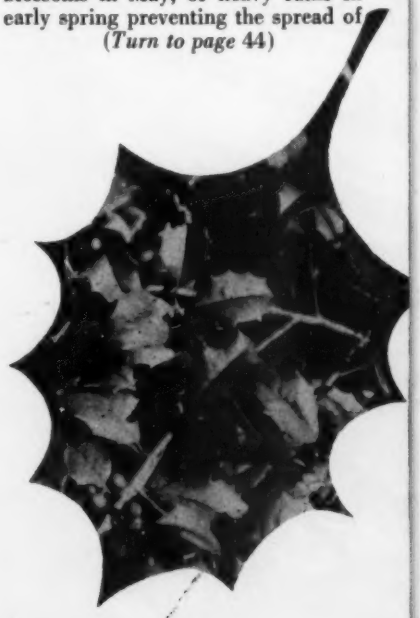
The results of this proper pruning were five-fold: (1) heavy limbwood, of no value in decorations, was eliminated; (2) trunks, bark and heavy limbs were left unmutilated — in other words, the trees were not damaged; (3) trees could be shaped as they were being pruned; (4) only the best grade No. 1, select holly was removed from a tree; (5) the same trees could be harvested annually.

This was quite a contrast to former harvesting methods. It had long been the practice of holly gatherers to hack all the branches from a tree or in many instances to fell the trees and then delimb them. Such vandalistic methods eliminated trees that had stood in the forests for upward of 100 years or more, or they retarded future berry crops for from 15 to 20 years. When holly was sold by weight, heavy limbwood increased the operator's profit. Such destructive harvesting methods drained large areas of holly trees from forest lands. Although some trees of these areas struggled for survival, many were lost as inferior hardwoods replaced the cut trees and crowded out young holly reproduction. With such cutting practices widespread, the once vast holly range was rapidly being obliterated.

American holly (*Ilex opaca* of the family *Aquifoliaceae*) is one of about 175 distinct species of holly that grow throughout the world, of which 13 species are native to North America. In landscape work holly has long been a favorite, and many tree nurseries specialize in its culture and production for this purpose alone. Its distinctive pyramidoidal shape, evergreen leaves and bright red berries blending with the architecture of the small home or large estate greatly enhance the aesthetic values of both.

Not all holly yields berries. The berry bearing or pistillate (female) trees for propagation must be pollenized from adjacent staminate (male) trees which produce exquisite blossoms but bear no fruit. As an individual tree it can be unpredictable—bearing heavily one year, being barren the next. Late frosts killing the blossoms in May, or heavy rains in early spring preventing the spread of

(*Turn to page* 44)



WOOD AND YOUR SHOES

If your shoes are comfortable, bend a knee to the next sugar maple you meet. From its wood come the lasts which shape the nation's footgear

By ROBERT BLUMENSTEIN

OTHER than as the source of the syrup that goes so well with his breakfast pancakes, the casual observer would probably not regard a sturdy maple tree as being important to his physical well-being. Not one in a thousand would even remotely connect this big-leafed, friendly tree with the condition of his feet—for better or for worse.

The maple, nevertheless, vitally concerns more feet than it does early morning palates. Upon it depend the style, fit, and comfort of virtually all the shoes made in the United States. If your shoes are utterly and completely comfortable, it wight be well to bend a knee to the next maple tree you meet. If not, heap the blame on your own indifference and the persuasive eloquence of a shoe clerk more intent on a quick sale than long-term customer satisfaction.

Shoes are made on lasts, and lasts are made from hard maple. Five relatively small concerns manufacturing hard maple last blocks supply 27 shoe last factories. These factories turn out the wooden forms of the human foot upon which are fashioned practically all the shoes worn by approximately 150 million Americans.

At the last factory, master models are hand carved by especially gifted and skilled model makers to suit various style trends. But before that, the last-block has traveled a long and rugged route. First, someone in Maine, Vermont, upper New York State, Pennsylvania, Michigan, or Wisconsin has chopped down a rock maple — the same tree from which maple syrup is obtained. The tree has been taken to a last-block mill and cut up into appropriate lengths. With the heartwood at the top of the cone, individual lasts are rough turned to remove the surplus wood and facilitate handling.

These rough turned blocks then are air-dried for from six to nine months to a moisture content of 25

Several model makers often work at one long bench. Note completed lasts on storage rack (left)

to 30 percent. Great care must be taken at this point to prevent checking and splitting. At the end of this curing period they are kiln-dried to a moisture content of five to six percent. Received at the last factory in carload lots, they are sorted into ten sizes and stored one size to a bin until needed.

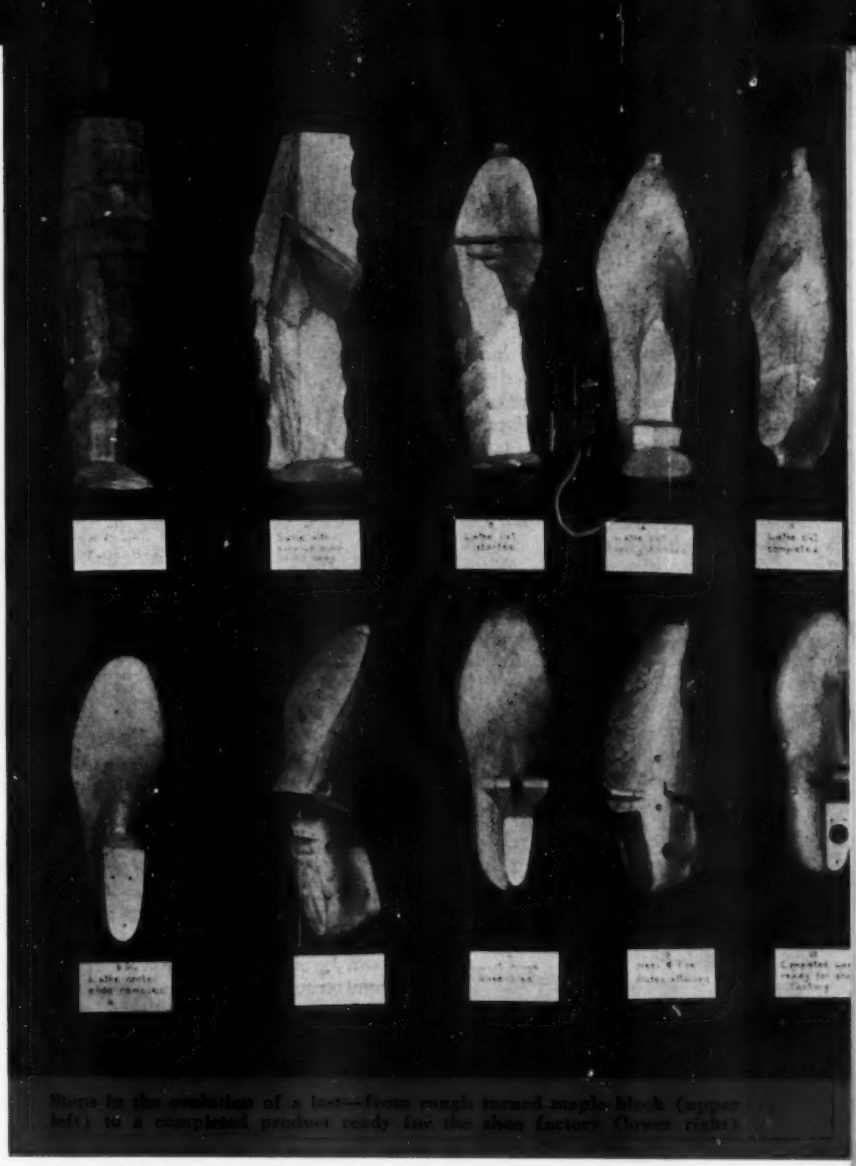
While shoemaking is an age-old craft rich in tradition, heritage and prestige, the very foundation of shoes —the last—has been recognized as an important fashion and health factor only within the past few decades. Back in 1629, over three centuries ago, one Thomas Beard and his journeyman shoemaker, Isaac Rickman, arrived in America on the Mayflower's second excursion cruise. Apparently, Master Beard neglected to bring along his foot forms, for we find that "he whittled his lasts from maple and hardwood with spoke shave and drawknife." Going back even further, it will be found that ancient cobblers made their shoes over lasts chiseled out of stone to conform roughly to the general shape of the foot.

Although off to a meager start in 1807, practically all of the real progress in last designing and construction has come within the past 50 years. That meager start was put in motion by William Young, an enterprising young Philadelphian, who was granted a patent for a minor last improvement.

Eight years later, in 1815, Thomas Blanchard, of Sutton, Massachusetts, invented and patented a lathe that turned an irregular shape which later had a great influence on last making. This improved tool was first applied to the shaping of gunstocks and ax handles, but finally was adapted to shoe lasts.

The Gilman lathe, now generally used in the last industry, in turn, was an improvement over the Blanchard idea inasmuch as it made possible the grading of sizes—the genesis of today's highly perfected methods of shoe fitting. The first last business in this country was set up in 1820 by Richard Richards who opened a shop which prospered on what is now Olive Street, East Lynn, Massachusetts. Albert T. Goodwin, his son-in-law, succeeded him, and in 1848 the firm took his name. The first such factory outside of New England was established in Dayton, Ohio, in 1839 and had a capacity output of 500 pairs a week.

In 1840, lasts again were slightly improved and one last served for two sizes merely by placing a shell or pad over the front or cone portion of the



Steps in the evolution of a last—from rough turned maple block (upper left) to a completed product ready for the shoe factory (lower right)

wood. These two sizes were known as slim and fat. Widths, as we know them today, were still unknown. During the 19th century, until about the period of the Civil War, the same wooden last was used for both right and left feet. Odd-looking things, the lasts of those days—straight, with no allowances whatever for the contours of the foot. As there was no such thing as a"right" or "left" shoe, they could be swapped indiscriminately.

This, however, had its advantages. If one happened to wear the same shoe on the same foot long enough to run the heels over, the remedy was simple. Just switch shoes and run them back even again.

Within the memory of many still living, shoe last factories made nothing but full sizes with seldom more than three widths. There were few changes in style from season to season. Early in the 20th century, quarter sizes were introduced, but were short-lived owing to the fact that dealers had to stock many more shoes to serve the same number of customers. The number of odd-size leftovers at each season's end was greatly multiplied. Reversion to full and half sizes was almost automatic, despite the wide promotion which quarter sizes had received.

From 1890 to 1900, shoes were fairly staple in style appeal, and changes in shapes of lasts were infrequent. When a satisfactory last was made, it was good for from one to five years. As a result, last makers worked a full year in advance of the actual manufacture of shoes in volume.

In those days there were two types of models—one for boots and one for lowcut shoes. The high shoes, or boots, were for fall and winter wear, the low-quarters for spring and summer. Sharp distinction also was drawn between lasts for the manu-

facture of high quality footwear and those produced for use in making cheap grade shoes. There is no such differentiation today.

With the turn of the century, say from 1900 to 1910, the last industry underwent a bit of a boom. Many shoe manufacturers had built large plants in the fast growing Middle West, and most of the last factories in the East had to be enlarged to take care of the increasing business pouring in from the new consumer territory.

By 1910 the average last factory operated from 20 to 40 lathes—a direct result of the rapid expansion of the shoe industry to keep in step with a rapidly growing country. With the ever-increasing fashion demand, there also developed a marked increase in the number of calls for better fitting shoes which would fit a greater number of feet.

The year 1920 ushered in a new era in last making which taxed the ability and skill of American industry. The industry responded in such a notable manner that it must now be conceded that America's last makers are leading the world in the creation of new and original models, incorporating features that provide for calculated exactness of fit determined by various individual styles.

A model maker deftly uses a file to put finishing touches on the instep region of a last. Note array of tools required in his work

Last model makers have become highly skilled craftsmen of special ability, with a fine sense of proportion and knowledge of technical requirements and fashion design. They can be classed as sculptors in wood and true artists in their own right. Because there is no single straight line on a last, they must fashion their models with meticulous care. They must have a keen conception of contour and the thousand angulations to which the human foot is subjected when in motion.

Making lasts is a custom business. There is no such thing as a staple or stock last. Lasts are made only "on order." After master models in a range of sizes have been completed, they are used as "pilots" in duplicating lathes which make the production runs. A left foot last is made by reversing the direction of rotation of the block and model—always made from the right foot—thus producing reverse lines and contours.

Following fine-feed turning, the last is trimmed, sanded down, or scoured to exact measurement, as checked by sole templates and girth tapes. A metal thimble is inserted in the heel to insure proper centering of the last in each of the numerous shoe manufacturing processes. A leather or composition top likewise is applied to the heel to cushion the force of the heel-nailing operation.

Of great interest to non-professional visitors to last factories is the hinge assembly. This is a carefully engineered device locked between the fore-part and back-part of the last during early steps of the shoe manufacturing process. Later it is released for the purpose of shortening the last so that the wood can be pulled out of the nearly completed shoe without impairing the contour of the upper, which has been so painstakingly modeled and stitched together in final form.

The margin for error in fixing sizes is scant. Tolerance in girth normally is limited to 1/32 inch, while variation in length may be no more than 1/24 inch. In length, one size change represents one-third inch; in girth one-quarter inch, and in width 1/12 inch. Since shoes are supplied in half sizes for length, and

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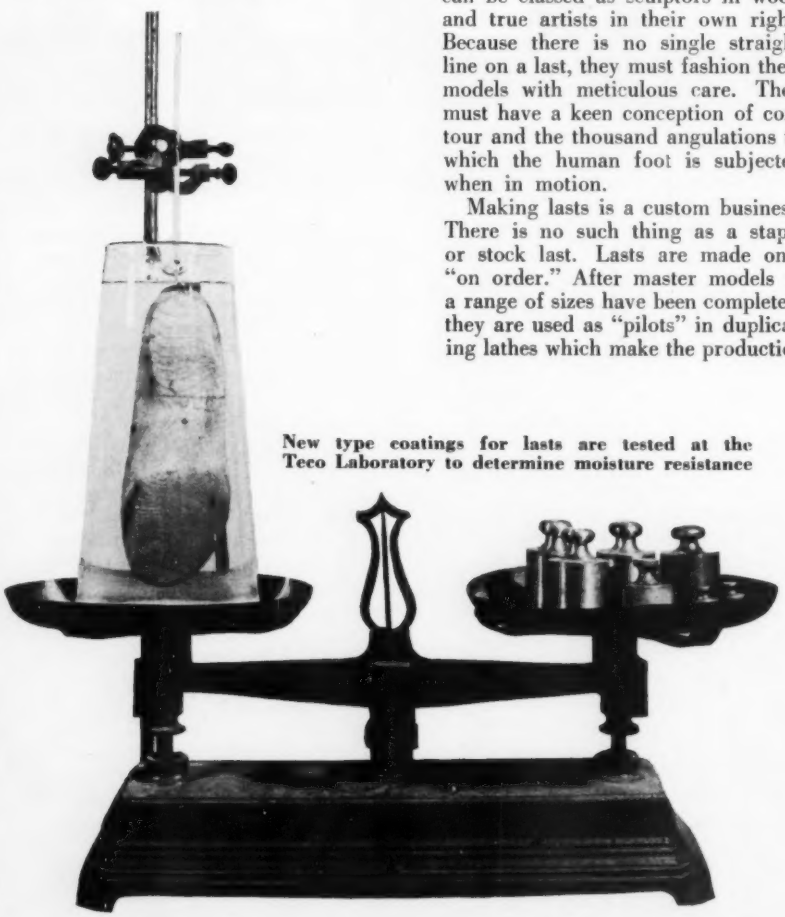


New type coatings for lasts are tested at the Teco Laboratory to determine moisture resistance

National Land, Water Policy Urged

Plan adopted by the Natural Resources Council of America

A number of member organizations of the Natural Resources Council of America recently adopted a platform and preliminary plan of action for the scientific use and development of natural resources, including a basic five-point recommendation that Congress adopt a national land and water policy.

The plan has been endorsed in principle by The American Forestry Association's Board of Directors.

As a further step, the Natural Resources Council, which includes 34 organizations and societies having vital conservation interests, set up a committee to assist in the preparation of a comprehensive land policy statement.

Members of this committee include: Ira N. Gabrielson, Wildlife Management Institute, chairman; Carl D. Shoemaker, National Wildlife Federation; C. R. Gutermuth, American Wildlife Foundation; Harry E. Radcliffe, American Nature Association; Charles E. Jackson, National Fisheries Institute; Fred M. Packard, National Parks Association; Howard Zahniser, Wilderness Society, and S. L. Frost, The American Forestry Association.

The statement adopted by the Natural Resources Council follows:

There is today a growing awareness of the fact that land, water, the living resources, and man are intimately related. Resource management must be considered not only in its separate categories, but in its entirety. It is time for the adoption of a national policy on natural resources. Agreement on such an objective will lend force to the successful prosecution of a broad resource-use program, and strengthen the support given to each resource. With these conditions in mind, a majority of the member organizations of the Natural Resources Council of America adopted the following platform and preliminary plan of action on October 2, 1950:

A Land and Water Policy

Principle: Adoption of a national policy by the Congress of the United States to secure in the public interest the maximum benefits from the nation's land, water, and related natural resources.

Action: Cooperate in the preparation of a comprehensive statement and policy designed to insure the permanent wise use of land, water, and related resources and the preservation of natural park and wilderness areas.

An Appraisal

Principle: Adequate inventory of the land and water resources of the nation to determine their condition, productivity, and potential use in relation to a priority of human needs.

Action: Support current inventories of all land, forest, water, range, and wildlife resources as the proper guide to the utilization and treatment of these resources; and develop other inventories where need is demonstrated in the public interest.

A Goal

Principle: Achieve unified scientific management and perpetuation of land, water, and the living resources in the widest public interest.

Action: Support the rapid development and application of a comprehensive scientific conservation plan for every unit of the nation's land and water; such plans to be appropriately coordinated with watershed protection and other programs designed for wise resource use and perpetuation.

A Method

Principle: Strengthen individual and group responsibility and participation in the planning and effectuating of conservation activities.

Action: Give continuous support to sound conservation programs on all public and private lands, and as a primary step, encourage the organization and development of soil conservation districts throughout the nation and urge widespread assistance to such districts.

A Motive Power

Principle: Economic, social, and cultural stability of the nation depends on scientific management and use of natural resources in the public interest.

Action: Promote educational programs designed to develop and perpetuate the concept of conservation to the end that all may share in putting them into effect and in enjoying the resulting benefits.

AFA ACQUIRES RARE DOCUMENTS

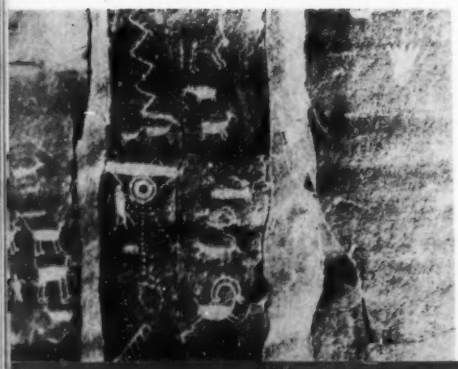
While conducting research for the October 75th anniversary issue of American Forests, the AFA learned that a choice collection of handwritten letters and rare books documenting Association history were available from Pennsylvania's first state forester, George H. Wirt, who retired in 1946 after 45 years of service. Accordingly, James P. McWilliams of AFA's Conservation Department drove to Camp Hill, Pennsylvania, to purchase these records. Two of the bound volumes were previously known to exist elsewhere only in the libraries of Congress and Agriculture. There are also letters by Dr. John A. Warder, first active AFA president, describing Association events from 1875 to 1897. Still in the Wirt collection are records he kept as director of Mont Alto Forest Academy (1901-1910) and many volumes sought by libraries.

← George H. Wirt and James P. McWilliams

Ginkgo State Park is nearly treeless. Note view from museum toward highway bridge over the Columbia

Washington's Stone Woodpile

By C. FRANK BROCKMAN



Ancient Indians left petroglyph picture writings on basaltic cliffs

Ages ago, cooling lava preserved and petrified this log

Let's visit Washington's Ginkgo State Park. Eons ago, cooling lava there created a petrified forest

THE expansive, tree-less, semi-arid basin in the central part of the State of Washington is famous for mighty, man-made Coulee Dam. But for all its ability to produce electricity, it pales into insignificance in comparison to the feat which Nature performed some 100 miles to the southwest millions of years ago—creation of the unique petrified forest within the 7000-acre Ginkgo State Park.

More than 200 tree species among the hundreds of specimens uncovered here have now been identified by qualified authorities combing the area which lies near the community of Vantage, where U. S. Highway 10 crosses the broad, historic Columbia River. It is truly a unique fossil forest, for none other approaches it in number of species, and in no other place in the world have trees been entombed and petrified in once-molten lava.

Why does a petrified forest exist here? What was the nature of the living forest that once occupied this area? How long ago did it exist? How was this region transformed from a timbered area to a land of semi-arid hills characterized principally by sage, and devoid of any timber save a few scattered junipers? Preserved in lava, how did these ancient trees escape destruction from fire when the searing, molten mass engulfed them?

The answers to these questions lie rooted in an understanding of the

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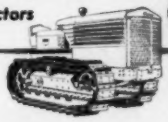


"THE SIGN OF EXTRA SERVICE"

geological story of central Washington—a story that goes back through the ages to Miocene times, more than 15 million years ago. In that ancient day the Cascade Range, principal topographical feature in the State of Washington, was as yet unborn. The course of the Columbia River was uncharacterized by the great arc which now encloses the area known locally as the "big bend country." The Wenatchee, the Methow, the Okanagan, and similar streams arising from highlands to the north, flowed south across a lower basin that embraced the present semi-arid area between the Coulee Dam and the southern part of the state.

Thus the stage was set for a series of cataclysmic occurrences that were to give us the petrified forest of the Ginkgo State Park.

Beginning about 15 million years ago, this area was characterized by violent volcanic activity. Lava, welling up from fissures in the earth, fanned out over the land, spread slowly northward and relentlessly over-ran the original broad basin. Each flow leveled off the terrain that it covered, interrupted the streams in the area, and eventually converted the region to the south of the northern highlands into a more or less swampy land.

In such an environment, cypress and water tupelo grew in profusion. Thus, in general appearance, the present semi-arid region of central Washington in that ancient day was not unlike the swamp lands characteristic today of large areas in the southeastern part of the United States.

Upon the lower slopes of the adjacent highlands—in what is now northern Washington and British Columbia—grew oaks, maples, sycamores, beeches, hickories, and chestnuts. A forest composed of sequoias, pines, spruces, and firs flourished upon the upper slopes of these mountains. In addition to these, there were other species of trees now extinct or nearly so—such as the ginkgo, sacred tree of the Orient.

As many of these trees in the forests of the northern mountains completed their life span, they fell to earth and were carried by various means down the slopes to the streams in the mountain valleys. These streams eventually transported such logs to the more quiet waters of the swampy lowlands. And here, scoured of limbs and bark, they floated upon

The annual rings of this petrified log remain true and well preserved

the surface of the calm waters as heterogeneous rafts and mingled with the swamp-loving trees typical of the lower elevations.

But those species that naturally inhabited the swampy lowlands and those that had been carried down from the northern mountains as logs were engulfed by the successive lava flows. Surface vegetation was destroyed by the heat and flame which accompanied these lavas. Likewise logs floating upon the surface, as well as those covered by only a few feet of water in the more shallow lake areas, were also destroyed.

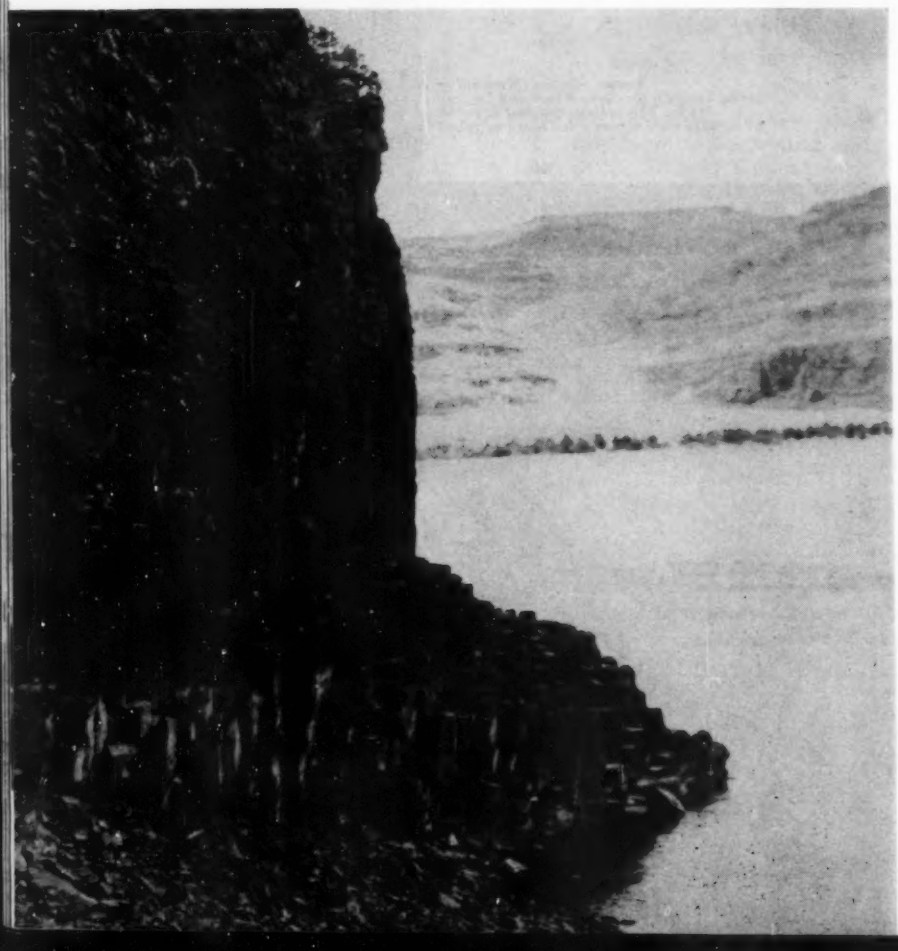
But those logs that had finally come to rest well beneath the surface of lakes and swamps were more amply protected. Surrounded by "pillows" of lava which had been robbed of much of their fiery nature by the cooling process in deeper waters, these tree trunks were sealed in an undamaged condition for an eternity by the passing lava streams. Their open cells and pores were impregnated by chemicals, and in a relatively short time they became petrified.

Numerous such lava invasions occurred over a period of nearly ten million years. In the long periods between each of these invasions of lava the original forests were again able to re-establish themselves, and again the lakes, swamps, and streams assumed dominance over the area. But with each impact of a later lava flow such re-established forests were again destroyed and a new layer of logs was engulfed and solidified into stone.

Eventually these lava flows assumed, layer upon layer, a thickness of several thousand feet. They completely obliterated the lower portions

(*Turn to page* 41)

Cliffs along the Columbia River, where Indians carved picture stories



Evergreens Forever

(*From page* 19)

pillows" are in reality stuffed with the sweet-smelling balsam needles.

Found on the Pacific Coast, the Douglasfir, *Pseudotsuga taxifolia,* runs a close second to the balsam in popularity. Oddly enough, this tree is neither a fir nor a spruce, although it is related to each and is known commonly by both names. It is the second largest tree in the United States, only the redwood surpassing it in size.

The Douglasfir supplies a very high grade of lumber and although the Rocky Mountain region is its natural habitat, it has been successfully grown from seeds in the East. Western cities competing for the distinction of having the largest community Christmas tree select the Douglasfir. Last season Bellingham, Washington claimed the world's title with a 153-foot beauty.

Next in line in popularity for Yuletide decorative purposes are the black spruce, *Picea mariana,* the redcedar, *Juniperus Virginiana,* and the white spruce, *Picea canadensis.* Local custom often influences the use of other species. On Maryland's eastern shore, redcedar has its adherents; in many southern states slash, loblolly or longleaf pine vie for favor.

Many persons are of the opinion that the cutting of so many millions of trees annually will eventually threaten the source of Christmas trees in the future. The fact is however, that the advice of Gifford Pinchot, given so many years ago to president Theodore Roosevelt, applies as well today.

The many Christmas tree farms and wisely managed forests in the United States are a guarantee of a lasting source. America has become forestry-wise since Roosevelt's time. Today, the realization that Christmas trees are a major forest crop has assured adequate protection of our trees.

The cutting of small evergreens serves two purposes. First, it affords clearance for larger trees, and second, it makes room for protection against fire by providing clearings and roads in the forests. In short, there is no need for any worry concerning the Christmas tree. It is here to stay.

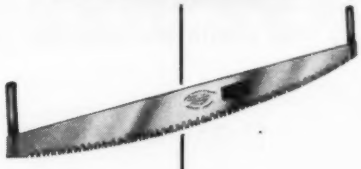
There are several versions of the origin of the Christmas tree in America. The most popular one is that the Hessian soldiers, brought to the colonies by the British to fight

(*Turn to page* 33)

An old "saw" says

TIME

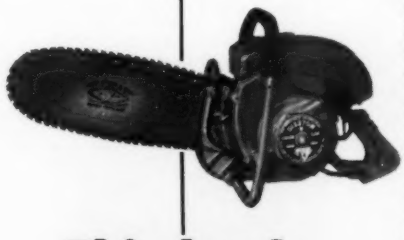
IS MONEY



A new saw

SAVES YOU

BOTH!



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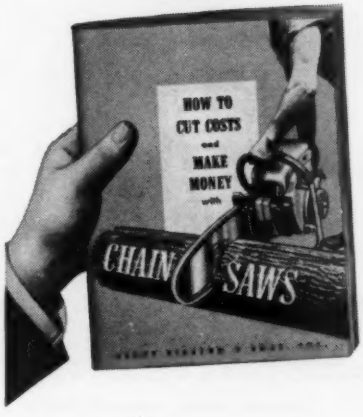

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A Beautiful Mistake

A forest of Australian eucalyptus trees graces California today. It was planted in the early 1900's with the mistaken idea of growing rail ties

By DAVID HELLYER

THANKS to sheer mistake, one of America's most unique forests escaped the sawmill and lived to beautify the hills of Rancho Santa Fe, California.

In the early 1900's, America's railroads viewed the dwindling supply of railroad ties with genuine alarm.

"The problem of future supply must be taken up now to insure a sufficient number of trees to meet the demand," warned T. O. Falkner, head of Santa Fe's lumber division, in 1906. "Experience has shown that eucalyptus trees make first-class ties."

So the Santa Fe purchased an old Spanish land grant rancho of some 8600 acres, near San Diego, California. They decided to plant some 700 acres annually in eucalyptus seedlings, counting on the trees to mature in from fifteen to twenty years, yielding from six to eight ties per tree.

But nowhere in the United States could eucalyptus seed be found in such quantity as they required. Australia alone held the answer, for the eucalyptus is indigenous to the land-down-under.

Falkner was dispatched with orders to bring home ample supplies of the precious seed. Months later, the Santa Fe agent began shipping back seed to the road's main offices in Topeka.

It was not long, however, before Australian government officials began to view these shipments with alarm. What would happen to their lumber exports should America begin to grow its own eucalyptus? They summarily ordered seed growers to cease selling to Mr. Falkner for shipment out of the country.

But Falkner was an enterprising man. He purchased property containing fine stands of eucalyptus, many of them rare species. He harvested his own seed. By the end of his mission, Falkner had managed to send home nearly 6,000,000 seeds, representing a wide variety of the Australian tree family.

Hailing the seed as the probable solution to the American railroad tie problem, Santa Fe officials put the planting program into full swing. A large corps of workers was dispatched to old Rancho San Dieguito, as the venerable Spanish land grant was termed. During the first three years of its operation, the program saw 3,500,000 trees propagated, and nearly 3,000,000 of these seedlings planted on the hills of what is today Rancho Santa Fe.

Came the time to make exhaustive tests on the new trees, tests to determine the adaptability of the eucalyptus to the rough work demanded of a railroad tie. To their dismay, Santa Fe technicians discovered a fatal flaw in an otherwise sweet ointment—the eucalyptus could not be treated successfully for soil rot. It would not stand up the required length of time underground. The whole project was a failure . . . the long trip to Australia a waste of time . . . three years of propagation was dead loss—so far as the railroad tie

(*Turn to page* 42)

The graceful eucalyptus trees on Rancho Santa Fe are nearly forty years old

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NEWS IN REVIEW

State forestry agencies in Oregon and Washington will receive one and one-third million dollars to help control forest fires during the present fiscal year. This annual allotment of funds under the Cooperative Clarke-McNary Act has just been announced by the U. S. Forest Service; Oregon will receive $708,166 and Washington $583,556 of the allotment.

The two northwest states have received 14 million dollars of federal funds for this purpose since 1924. The cooperative program, initiated in 1911, was revised and broadened in 1924 largely through the efforts of former Senator McNary of Oregon. Objectives of the law are to assist private and other nonfederal landowners to protect their timberlands adequately from fire.

Because of severe fire conditions in California and the Southwest, acreage burned this year on national forests has nearly doubled that of a year ago, according to Carl A. Gustafson, chief of the Division of Fire Control in the U. S. Forest Service.

By September 30, 324,414 acres of land inside the national forests had been devastated by fire as compared with 171,751 acres burned during the first nine months of 1949. The five-year average acreage burned for the same period was 192,621.

Receipts from national forests during fiscal year 1950 reached an all-time high of $33,594,614, an increase of eight percent over the $31,075,321 taken in during fiscal year 1949. Approximately 87 percent of the total receipts was derived from the sale of timber, according to Lyle F. Watts of the U. S. Forest Service. He added that approximately 25 percent of all funds received by the Forest Service is returned to the states for distribution to counties in which national forests are situated; the funds are spent on public schools and public roads. The Forest Service is authorized to spend an additional ten percent of its total income for construction and maintenance of roads and trails within the national forests.

Forests occupy three fifths of the land area of central Kentucky and contain a timber volume of 16.9 billion board feet, according to a report just released by the Central States Forest Experiment Station at Columbus, Ohio.

Oak-hickory and mixed hardwood forest types make up about three fourths of the commercial forest area; the various species of oaks comprise more than 45 percent of the sawtimber stand. As revealed by the report, less than 15 percent of the total sawtimber volume is in high-quality logs suitable for production of veneer, furniture and cooperage.

More Douglasfir plywood is available for civilian uses than ever before, with production today at the record volume of about 50,000,000 square feet a week, reports O. Harry Schrader, Jr., managing director of the Douglas Fir Plywood Association.

It is true, Schrader made clear, that buying of plywood for defense and war needs has aggravated a tight supply situation. "Plywood is basically a peacetime material — for homes, buildings, railroad cars, farm structures, furniture, packaging and boats. With construction and industrial production at record highs, demand for plywood for civilian uses is unprecedented, and plywood usefulness continues to grow and spread."

Completion of the program for establishment of the National Tribute Grove of redwoods was announced in the newly issued annual report of the Save-the-Redwoods League. Located on Smith River and Mill Creek in the Jedediah Smith Redwoods State Park, the grove of more than 5000 acres is a tribute to all who served in the armed forces of the United States in World War II.

The annual fall census of trumpeter swans, made by personnel of the National Park Service and the Fish and Wildlife Service, showed a population of 376 as compared with 451 recorded in the August 1949 survey. In the area of Yellowstone Park and the Red Rock Lakes National Wildlife Refuge in Montana the count was down by 62 birds. Losses from other areas amounted to 13 swans.

The porcupine, which climbs to tree tips and eats the tender bark, is accused of murdering or maiming many young pine trees, in one of his worst rampages in recent years in California. Hunters and other forest travelers have been asked by the U. S. Forest Service to "shoot him on sight."

The August A. Busch Wildlife Management Area, formally dedicated to public use in a ceremony last July, will have a resident population of Canada geese within the next year or two if an experiment conducted by the Missouri Game Commission proves successful.

Forty-six goslings from the Bear River Marshes of Utah, furnished by the U. S. Fish and Wildlife Service, were transported early this fall to the refuge, banded, and released. Research workers have found that female Canada geese almost invariably return for nesting to the spot from which they make their first flight. For this reason, survivors of the hunting season are expected to return to the wildlife management area next spring.

Howard R. Jones, assistant chief engineer in the Washington office of the Forest Service, has been named regional engineer of the Service's Northern Region with headquarters in Missoula, Montana. He will succeed Fred Thieme as head of national forest engineering activities in Montana, northern Idaho, northeastern Washington and northwestern South Dakota.

The Forest Products Research Society has announced plans for holding its 1951 Annual Meeting and International Industry Show at Convention Hall in Philadelphia the week of May 7 through 11. Firms from Canada, England, Europe and possibly other foreign countries will be represented with exhibitions in the Forest Products Industry Show. Among the organizations to participate in technical sessions and the show are: the Wood Industries Division of the American Society of Mechanical Engineers, The Society of the Plastic Industries and The Society of American Foresters. Still other organizations are reviewing plans for participation.

A new educational film featuring the colorful commercial fishery fleets of Massachusetts is being planned by the Fish and Wildlife Service for production next summer.

Prints of the 16mm seafood movie, with sound and color, will be distributed through the Department of the Interior's distribution centers and through private film libraries. They will be available early in 1952, free of charge, for showing to schools, industrial and fraternal organizations and club groups.

Evergreens Forever

(*From page* 29)

against George Washington's Continental Army, became homesick and introduced the custom to cheer each other.

Martin Luther, the famous 16th century German religious leader is said to have originated the custom of decorating the Christmas tree. Walking in the woods one moonlight night, he noticed how beautiful the evergreens appeared as the snow on the branches reflected the moonlight. He cut a tree and placed tiny lighted candles on the branches. This idea soon spread far and wide, and before long, it became the custom in our country.

On each Christmas Eve since 1923, the White House lawn has been decorated with a huge Christmas tree. This year as in years past, the President of the United States will participate in a tree-lighting ceremony which will be broadcast throughout the country. Homes all over the country will be lighted with Christmas bulbs and candles. The highlight of the festivities will be the decorating of the tree.

This year, when millions of Americans buy their Christmas trees, they will also be helping indirectly to keep the forests and evergreen farms from acquiring an over-supply of trees. It is a comforting thought to know that there will be evergreens forever.

Half Century of Service

(*From page* 13)

As yet no state requires the licensing of practicing foresters although members of the Society in several states have been urging adoption of licensing laws. Until such time as licensing examinations are provided, the best evidence of a forester's professional competence is his membership in the Society of American Foresters. Admission to membership is by election only, upon proof of qualifications.

The establishment and widespread acceptance of such privileges and responsibilities provide a brief insight into the accomplishments of the Society during 50 fleeting years of existence. Based on a foundation of active participation and contribution on the part of its membership, the Society is dedicated to furthering the continuing advancement of the forestry profession.

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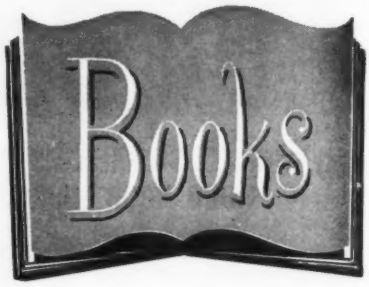

When ordering books—any book—remember that your AFA membership entitles you to a ten percent discount. Order through the Book Department, The American Forestry Association, 919 17th Street, N.W., Washington 6, D. C.

NEVER MARRY A RANGER, by Roberta McConnell. Published by Prentice-Hall, Inc., New York. 261 pages, illus. Price $2.75.

Have you ever dreamed of getting away from it all and spending the perfect summer tucked away in some remote mountain section? Roberta McConnell had in mind just such a summer when she and her ranger husband arrived with their two children at a U. S. Ranger Station high on a Utah mountain peak, but it turned out quite differently from what she had expected.

She has written a clever and humorous record of her summer in a wilderness, with her husband playing his role as ranger only too well. She had to be ingenious to devise entertainment for herself while he rode the range all day and the children entertained themselves in the "yard." To break the boredom she ran the gamut from talking to herself to trying ballet. She even invented new ways to get around the endless stretch of red tape involved in every official action. She has rounded up hordes of characters they encountered there —each a distinctive personality.

All of which adds up to fun-packed pages by an unsuspecting wife who found out that "there's more to a forest than trees."

EDUCATORS GUIDE TO FREE FILMS (Tenth Annual Edition), 1950, compiled and edited by Mary Foley Horkheimer and John W. Differ. Published by the Educators Progress Service, Randolph, Wisconsin. Price $5.

An excellent source of information concerning films to be obtained at little or no cost for use in schools, churches, or other groups. Information is given on availability and whether or not the borrower must pay cost of transporting the film. A brief sketch of what the film is about is also included as a guide to its worth to the potential user.

BIRDS—A Guide to the Most Familiar American Birds, by Herbert S. Zim and Ira N. Gabrielson. Published by Simon and Schuster, New York, N. Y. 157 pages, illus. Price $1.

Dr. Zim is educational consultant for the U. S. Fish and Wildlife Service and Dr. Gabrielson, president of the Wildlife Management Institute. These two authorities, along with the able assistance of members on the professional staff of the U. S. Fish and Wildlife Service, have cooperated to bring out a charming book with all the basic information needed to understand bird lore.

James Gordon Irving, an expert artist, presents in full color 112 of the most familiar American birds. With these as keys, other related and similar species are mentioned, helping the reader to identify over 250 birds in all. Complete with range maps, facts about the traits and habits of birds and where and how to look for them, it is an excellent field book and is small enough to fit your pocket.

HUNGER SIGNS IN CROPS. Published by The American Society of Agronomy and The National Fertilizer Association, Washington, D. C. 390 pages, illus. Price $4.50.

This much-needed book on nutrient-deficiency symptoms in crops was produced by nineteen experts who have made a close study of the subject, each in his own particular field, for many years.

Care has been taken to keep the book as nontechnical as possible so that this knowledge may be used by the layman as well as the expert. Some of the chapters include a key for quick identification of a deficiency by its symptoms. There is a wealth of illustrations in color and in black and white; with the accompanying legends, they tell a rather complete story by themselves.

Hunger Signs in Crops is another significant contribution to human welfare. Our lives are inextricably linked with the health of soils and plants, for what is lacking in the soil will be lacking in the plants and, finally, in animals and man.

BIRDS OF THE PHILIPPINES, by Jean Delacour and Ernst Mayr. Published by The Macmillan Company, New York. 309 pages, illus. Price $3.75.

Jean Delacour and Ernst Mayr, internationally-known ornithologists, are on the staffs of the New York Zoological Society and the American Museum of Natural History. They have both spent time in Oriental and Australian regions collecting and studying birds.

Together, they have brought out this book which identifies the rich bird life abounding in the region of the Philippines. Complete with line drawings, it is a store of general, accurate information.

A SURVEY OF THE RECREATIONAL RESOURCES OF THE COLORADO RIVER BASIN. Issued by the National Park Service, U. S. Department of the Interior. Available from Superintendent of Documents, Washington, D. C. 342 pages, illus. Price $3.25.

This monumental piece of work is the result of a survey started in 1940 and 1941 by the National Park Service to obtain facts essential to the establishment of Department of the Interior policies regarding classification, development and administration of possible water control projects and areas within the Colorado River Basin. The report considers recreational possibilities and preservation of scenery and other natural features associated with the program of dam and lake development. The bulletin also provides valuable geologic, archeologic, plant and animal life data and a series of sixteen maps.

AUDUBON'S BIRDS OF AMERICA, with introduction and descriptive captions by Ludlow Griscom. Published by The Macmillan Company. 320 pages, illus. Price $2.95.

The best of John James Audubon's famous paintings — 288 full page, four-color plates with descriptive text —have been carefully chosen for reproduction in a handsome, popular edition. Heretofore, Audubon's paintings were published in no particular order, but these selections have been grouped together in the families to which they belong with the sequence following the current accepted order.

Ludlow Griscom, Chairman of the Board of the National Audubon Society, in his introduction, discusses this great American naturalist-bird painter and the spread of his fame since his death nearly a century ago.

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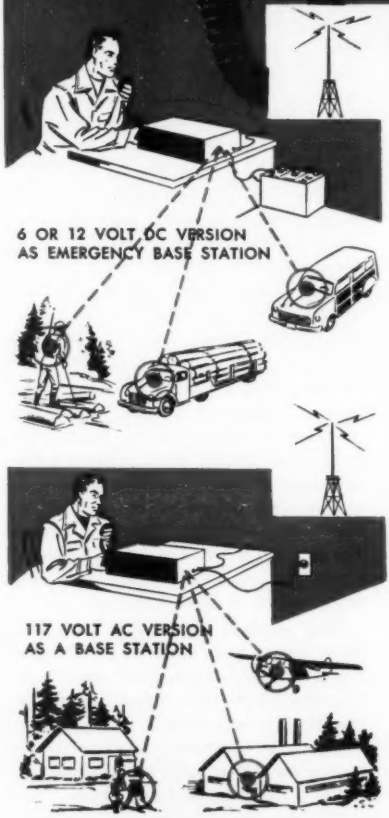

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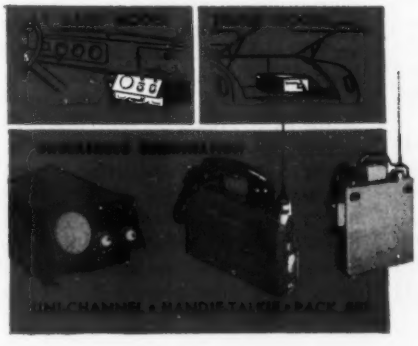

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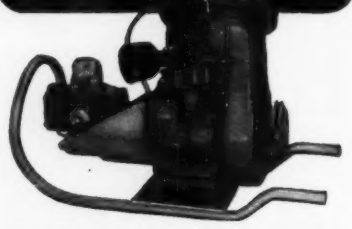

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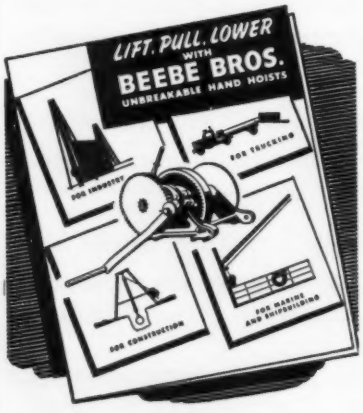

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Foresters, Fair

(*From page* 15)

er, and grub for the summer they ran surveys through roadless and trailless areas, building rough bateaus to take them down the rivers where the woods were too dense.

Foresters in those last frontier days were even deputized to bring law and order to wide-open towns. One year up in Montana they were called upon to close the saloons in a small town which had voted dry. Years later one forester, reminiscing on the "good old days," remarked, "The forester ranger and the mounted police were on the same footing. People always liked us a long way off."

There was little in that picture to appeal to the fragile female of a day when voluminous skirts and petticoats were in vogue. Desk jobs were few and limited to those with professional training or long technical experience.

So the first decade passed—the forestry profession in its infancy and no girls. The second decade brought little change. Up at Cornell University in New York, Mabel Beckley received her forestry degree in 1915 without fanfare. So far as is known, she was the first woman to receive a degree in forestry, but she never worked at it. She married a classmate a year after graduation and settled down as Mrs. Fred Millen, wife of a Texas forester.

Second known powder puff forester was Grace Estella Dodge, who graduated in 1922 from the University of Washington's forestry school. She received her master's degree in 1924 and immediately married a classmate, J. Russell Mills, who was teaching logging engineering at the University. In the language of the forester, they have produced excellent second growth timber—a son, Robert, who received his forestry degree from Washington just this year.

The University of California graduated its first feminine forester in 1928, Alice Craig, who worked as part-time assistant in the school of forestry while studying for her master's degree. However, she, too, shortly removed herself from the field by marriage and now lives on a ranch in Jackson, Wyoming.

Thus woman suffrage came, and the flapper age passed with forestry still a man's profession.

Then in 1930 Margaret Stoughten ushered in a new era for the female forester. Graduated from Iowa State College, Margaret was the first girl to apply her forestry training. She took the Civil Service examination, passed, and was taken on by the U. S. Forest Service in its Southeastern Experiment Station at Asheville, North Carolina.

Men working at the Station in those days well remember Margaret. She was a great field worker and a prolific writer, turning out articles on such subjects as "A Method for Estimating Future Volumes of Partially Cut Stands in the Southern Appalachians" and "Much Heartrot Enters White Oaks Through Fire Wounds."

More particularly, the men remember how Chuck Abell, a young forester at the Station, pushed Margaret into an icy creek one morning. She stayed on the job just the same and won the final round by marrying the boy. After her marriage Margaret stayed on the job for five years, working with Chuck in the field.

Transfers are inevitable in the life of a young forester, and it wasn't destined for the two married beginning foresters to have individual careers. Today Chuck Abell is a ranger in California, and Margaret's study of growing things is pretty much confined to three lovely daughters.

The 1930's produced nine other women foresters, seven of whom worked at their chosen field. Two held desk jobs at the California Forest and Range Experiment Station, one was employed in the office of the supervisor of the Shasta National Forest, two worked in the Forest Service office in Washington, D. C., and one became a librarian.

The seventh, Mrs. John H. McDill, Bryn Mawr 1927 and Yale School of Forestry 1931, embarked on a project, unique for the times but mighty practical. Acquiring a large tract of land in Bridgewater, Vermont, she successfully managed it for game protection and forest production.

Of this crop, four careers were short-lived, terminating as usual in marriage, but two of the girls went on. Alice Stuart, graduated in 1933 from the University of Minnesota Forestry School, was soon employed by the U. S. Forest Service. She held a great variety of jobs: compiling statistics, assisting in studies at experiment stations, and conducting a survey of Forest Service recreational facilities, needs and possibilities.

But Alice was no armchair forester. Desk work bored her, and she

wanted to get into the tall timbers to work with the men. She would have enjoyed the work of the ranger, the timber cruiser, or scaler. The Forest Service had no such jobs to offer —to women. The lumber industry, too, raised its eyebrows. A woman in the woods? Well, there were certain complications.

So after ten years in her profession, battling every minute for what she wanted, Alice threw in the sponge and set forth for America's last frontier, Alaska. There she gathered specimens in the tundra region to send back to various university laboratories. She has long since given up this occupation, but the lure of Alaska has held her. Forest Service officials say she still sticks her head in the door of the Juneau office every so often to ask, "Any field job for me?" Always the answer is "No." Yet the men grudgingly admit she could do the work; it's just those—er—complications.

One girl graduate of the thirties has stayed with the forestry profession. Gray-eyed, soft-spoken Frances Flick took a library course at the University of Syracuse after graduating from Iowa State Forestry School in 1939. Because of her technical training she was soon working in the forestry school library at Syracuse. After getting a library degree, she worked in the university engineering library until she took a Civil Service librarian examination and went to the U. S. Department of Agriculture Library in Washington, D. C. There Frances specializes in forestry bibliographies and forestry references. She is an active member of the Washington Section of the Society of American Foresters and this year was elected secretary of the Section—the first woman to hold office there.

With the forties came the first peace-time draft, closely followed by World War II, and women flocked to the woods. They ran sawmills, chopped trees, and sold them to the mills, watched for fires from lonely towers high on the mountains, and planted acres of barren land to trees. They did a commendable job, but the men returned from the war and the woods just weren't big enough for both of them.

During this turbulent period 14 girls were graduated from accredited forestry schools, ten since 1945. Their record is sketchy because their work period has been short. Five took jobs in their profession, two soon married, and now there are

(*Turn to page* 42)

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New Hope in the Fight Against Dutch Elm Disease—a six-page leaflet (Educational Bulletin No. 91) describing the use of Carolate in combating Dutch elm disease. Prepared by the Bartlett Tree Research Laboratories. F. A. Bartlett Tree Expert Co., Stamford, Connecticut.

From Log Yard to Lumber Assorter—an illustrated folder on Wheland sawmill equipment. *Operating Costs Up? Here's How to Trim 'em* — a folder describing features of the Wheland Multiple Saw Trimmer. *Can You Afford Not to Have This Equipment?*—a folder giving facts about the Wheland heavy duty carriage and band mill. All three available from The Wheland Company, Chattanooga, Tennessee.

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Practical Nut Growing—This sixty-page booklet is written in an effort to proclaim the advantages of nut trees as ornamentals and food producers. Also contains some practical instruction in the planting and care of them. Available for $1.50 a copy from Benton & Smith Nut Tree Nursery, Wassaic, New York.

America's Strength Grows in Her Forests—attractive eight-page teachers's manual designed to create interest in and understanding of the forest resources of the United States. It outlines many ways of adapting forestry study to regular classroom activity. American Forest Products Industries, Inc., 1319 Eighteenth Street, N. W., Washington 6, D. C.

Blister Rust — Scourge of Sugar *Pines* — designed to tell the public with pictures and in few words some of the salient facts about the white pine blister rust: the importance of sugar pine, what blister rust is, and how it is being controlled. Blister Rust Control Project Headquarters, 2288 Fulton Street, Berkeley 4, California.

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Washington's Stone Woodpile

(*From page* 28)

of the tributaries of the Columbia. Today only the northward extensions of those tributaries remain as indicators of the former pattern of drainage in this area.

Upon the heels of these volcanic outbursts came a great uplift to the west that was eventually to evolve into the Cascade Range. This great mountain rampart intercepted much of the moisture that was carried inland from the Pacific and, in consequence, the climate of eastern Washington was greatly modified. The lush, humid forests of a former time were doomed; never again were they able to re-establish themselves in this region. Today they have been replaced by plants that are adapted to more arid conditions.

The uplift to the Cascade Range profoundly affected the area in other ways—ways that determined why we can see many of the logs that were engulfed and preserved by lava millions of years ago.

Co-incident with the formation of the Cascades came a general uplift of the great lava plain to the east. As this land was slowly raised, accelerated erosion of many types stripped away much of the surface. The lava plain was dissected by streams into a mass of channels, gullies, and deep canyons, interspersed by hills, ridges, and minor mountains.

By such action, many of the petrified logs were destroyed, but many others were exposed or made more readily available to those who sought them beneath a relatively shallow surface. In such places they remain today—mementos of a distant past, preserved in lava as symbols of the forest wealth characteristic of central Washington in yesteryear.

Long before the coming of the white man to this region the Indians utilized certain of the petrified logs in the manufacture of spear and arrow points and many Indian artifacts of this material have been found in the area. A further indication of the presence of an earlier people is a number of picture writings—petroglyphs—found upon the basaltic cliffs bordering the Columbia River a short distance above the bridge at Vantage.

One might readily imagine that the animal life of this region, 15 million years ago, was as unique and as varied as its flora. Undoubtedly this was true, but fossilized remains indicative of the early fauna here are scarce. There is one interesting find—evidence of an aquatic, short-legged rhinoceros (*Aphelops*) which was discovered in 1935 near Blue Lake in the Grand Coulee country, not too many miles distant from the Ginkgo State Park. The carcass of the animal had been consumed but there were a number of bone fragments and an impression of its body had been left as a mold in the lava.

The fossil forest of the Ginkgo State Park is one of 12 known areas of that type scattered through that section of the state. Discovered in 1931 by Professor George F. Beck of Central Washington College, it was established as a state park by the Washington Legislature in 1935. It was selected in preference to the other fossil forests of the region for three principal reasons—the size and abundance of its finely preserved logs, the exceptional number of tree species involved, and the fact that it was adjacent to a major cross-state highway and therefore more accessible.

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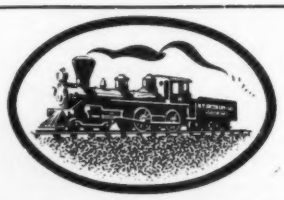
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Foresters, Fair

(*From page* 37)

three. Mildred Kocic, Syracuse 1948, is a research chemist with the Hollingsworth and Whitney Company in Waterville, Maine. Joye Smith, Colorado A&M 1948, is employed by the U. S. Forest Service at the Rocky Mountain Forest and Range Experiment Station in Fort Collins, Colorado as an assistant in range experiments. Colleen McCarthy, University of Montana 1948, is employed by the Forest Service in Washington, D. C., on special projects, such as foreign forestry studies and military requirements in timber. She has served for two years on the program committee of the Washington Section of the Society.

That completes the roll except for Diana Smith, now employed by the Forest Service at the Forest Products Laboratory in Madison, Wisconsin. Diana is not a graduate of an American school, but received her training at England's University of Edinborough. Turned down in English forestry, Diana came to America and at present she studies wood specimens, analyzing growth rings and other structural features.

Over half of the lady foresters have worked in the forestry field, batting out an average of about three years. Ten of these have gone into government service, the other five into private industry. Over two thirds of the lady foresters have married. The rush to forestry, shown by the graduating classes of 1947 and 1948, is over. One girl has received her forestry degree in the last two years and only one is now enrolled.

As yet, the fate of women in forestry is still being determined on the merits of the individual applicant. In some branches and in some localities, the welcome mat is out. In others, applicants must brazenly stick a foot in the door or risk having it slammed in their faces. But to paraphrase an old expression — faint heart never won, fair lady! Besides, few forestry employers actually have a policy excluding women, and for those who make good, there's the satisfaction of a welcome from the Society of American Foresters.

A Beautiful Mistake

(*From page* 30)

program was concerned. Propagating and planting crews were quickly withdrawn, and the program was abandoned.

But the trees—they continued to grow, blissfully ignorant of the program's failure. As for the Santa Fe Railroad, they were faced with a perplexing question: what to do with 3,000,000 eucalyptus trees and 8600 acres of ranch lands? Included in the stand were many rare species, including the *Euc. citriodora*, and the *Euc. viminalis* and *crebra*, the so-called "weeping-willow" varieties; large stands of *Euc. rostrata* and *robusta*, two of the commoner varieties, plus quantities of *Euc. corynocalyx*, *paniculata*, *leucoylon*, *sideroxylon*, *cinera*, *cornuta*, *diversicolor*, *Lehmanni*, and *microtheca*.

Impressed by the exceptional beauty of the young forest, Santa Fe Railway officials eventually decided to open the ranch for development into exclusive homesites. A "protective covenant" plan was initiated. to insure forever that the area would be restricted to larger holdings, protecting the natural beauty of the setting. Thus "Rancho Santa Fe" came into being.

The new development quickly attracted many of the nation's great and prominent families. Celebrities like Douglas Fairbanks and Bing Crosby purchased large holdings.

But the real beauty, the real attraction of Rancho Santa Fe centers around the graceful eucalyptus trees which today stand intact—thanks to a mistake!

Romance of Firewood

(*From page* 17)

the case, don't give up. Review your fire building technique! The first step is to abandon all Indian lore, and resign as a member of the One Match Club. When andirons are used, the wood should be lightly laid over kindling which has been placed over crumpled newspapers or other easily lighted materials.

After the fire has started, keep at least three logs burning—two resting on the andirons, the other on top of the first two. Since wood burns with a fairly long flame and intense heat, it should not be piled too high, because the heat will be forced up the chimney instead of out into the room. Don't let the logs rest against the walls of the fireplace, and have them short enough to allow several inches of air space along the sides as smoke preventive.

A small amount of ashes, serving as a bed for the accumulation of glowing charcoal, yields steady heat and aids in the ignition of fresh wood as it is added. A fireplace choked with ashes, however, will cut down the draft under the logs, and burn out the andirons. To check the fire, sprinkle ashes over the burning logs. Don't use water. The sudden change of temperature will cause the fire bricks to crack, and even cave in!

By now, your fire should be blazing merrily. "But," the furnace-bred skeptic might say, "So what! The fire is burning and we've got romance. Does firewood have any practical advantages?"

For one affirmative answer to this question, properly seasoned wood is clean and free from disagreeable, throat irritating dust, produces little smoke and practically no soot. For another, a cord of mixed woods, measuring 4 x 4 x 8 feet, equals in heat value one ton of anthracite coal. There is little waste in wood, for a cord leaves only about sixty pounds of ashes while a ton of hard coal will leave from two to three hundred pounds. And, if you have a garden, wood ash is of great value as a fertilizer, particularly if you grow iris.

Trouble? Yes, a little. But it's worth it, to have an open hearth that really burns. Many millions of Americans think so, anyway. Maybe they feel as John Greenleaf Whittier did, when he wrote *Snowbound*:

"What matter how the night
behaved?
What matter how the north wind
raved?
Blow high, blow low, not all its
snow
Could quench our hearthfire's
ruddy glow . . ."

A man gazing into the flickering blaze joins those who have lived before. He sits before their fire, whether it is in the savage's smoke-filled cave, the knight's hall, or the pioneer's oak-beamed room. For a moment, he finds contentment.

Wood and Your Shoes

(*From page* 24)

a broad range of widths, it becomes necessary to fashion the lasts with minute accuracy — a job requiring high skill since all surfaces are curved in varying degrees.

Once the last reaches the shoe factory it becomes obvious why the tough hard maple has been the traditional last wood. The last, as the shoe is molded around it, is subjected to heavy blows, nailing, walling of the sole, and exposure to high and low humidities at various temperatures. All in all, it takes a terrific beating. The number of shoes made on a single last may run to a maximum of around 200. A fair average would be from 100 to 150 shoes per last.

In view of all this, dimensional stabilization of shoe lasts is imperative. The lasts are exposed to fluctuating atmospheric conditions and thus, like any wood product, tend to shrink or expand. This necessarily will affect the sizes of shoes. This tendency is aggravated by the fact that the human foot is subject to its own dimensional fluctuations. It is known to expand as much as five percent from heat and usage. In the morning it is smaller and weighs less than in late afternoon, if it has been put to extensive use during the day.

The physiological effects of these variations are so wide in their implications that, in at least three institutions of higher learning, research programs are being conducted to the end of eradicating fatigue, in which footgear plays such an important role. Harvard University, Springfield College and the University of South-

(*Turn to page* 44)

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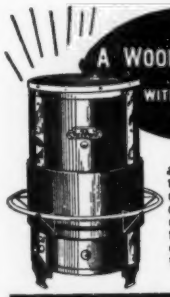

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Wood and Your Shoes

(*From page* 43)

ern California are the leading exponents of this study. At the University of Southern California, physiological effects of shoe wearing are keenly scrutinized by a staff of scientists and graduate students supervised by Professor Lawrence E. Morehouse. Their findings are closely followed by the shoe last manufacturers as an aid to last refinements and consequent perfection of shoe fit.

Since the customary wax, or wax-shellac-type finish applied to the lasts is not an efficient insulation against the passage of moisture vapor, and is not resistant to heat and solvents encountered in the shoe factory, its effectiveness in preventing movement of the last is extremely limited. Aware of these conditions, last makers have interested themselves in determining what can be done to obtain improved last stabilization and thereby more satisfactory performance and longer service for their product.

To this end, the Last Manufacturers Association some months ago commissioned the Timber Engineering Company, an affiliate of the National Lumber Manufacturers Association, to conduct a research program in its laboratory in Washington, D. C., aimed at improving dimensional stabilization of shoe lasts.

The last is not the only factor in shoe manufacture in which wood and wood products are involved. Heels on many styles of women's shoes are built of wood. In certain industries, like ice cream manufacturies, for example, wooden shoes are employed in some phases of the work as a safeguard against saturation with icy water, salt, chemical compounds and solvents.

Thus is set up a little-known affinity among the lumber-working industry, the leather industry and others. Being an industry-owned, non-profit organization dedicated to the advancement of quality control in all branches of wood utilization, the Timber Engineering Company is well suited for such liaison work.

Harvest Time for Holly

(*From page* 21)

pollen, will cause such barrenness.

Tolerant of shade, trees in some areas may have beautiful, dark-green leaves one year and produce spotty or yellowish leaves in another. A tree growing in a damp site will one year far surpass, in beauty, a tree growing on a hill. Twelve months later the reverse will be true. Heavy with berries yet scanty in leaves, the same tree a year later may produce bountiful leaves but not many berries.

Factors affecting the quality of holly are also responsible for the shifting of harvesting areas together with changes of market price. Like most products, the price of holly has increased considerably in the past ten years. Scarcity of labor, wage advances, increased shipping costs, higher prices for containers have all contributed to the rise. The law of supply and demand holds true in the holly trade. The demand is always there at Christmas time, but the supply during bad growing years is lacking, so the price goes up.

The holly trade or business consists of farmers, woodland owners or growers from whose land holly is harvested; buyers, agents and commission men who gather or purchase the holly; florists, street vendors and other retailers who sell the holly to the public. Passing through so many hands is another reason for the high price of holly.

Look at a typical example: The farmer is paid, say $6 for a standard crate of holly, $7 if he furnishes the crate (a standard holly crate is 2 x 2 x 4 feet). The commission man seeking 100 percent on his investment charges the retailer $14 a crate, and the retailer looking for his 100 percent sells the holly by the sprig or spray and receives from $28 to $50 a crate. Profitable? Yes, but the season is short and the "hay ride," or "holly ride" in this case, must be completed in one week—the week before Christmas — for the consumer wants his holly fresh. On December 26 holly, to a retailer, is as worthless as last year's bird's nest.

The Maryland plan for "certified holly" eliminates the middleman and the retailer, for the consumer can purchase his holly direct from the

farmer and be assured of the best at a reasonable price. Instigating this plan created widespread interest throughout the several sections of the country where holly is native. This interest culminated in 1947 with the founding of the Holly Society of America, Inc., to foster the growing, marketing and conserving of American holly. Research in various cultural and physiological aspects of growing holly and establishment of arboretums are additional aims.

We in the United States are sentimental about the Yuletide. We listen for the tinkle of sleigh bells, respect the exchange of season's greetings, enjoy trees decked with tinsel, balls and lights, are sensitive to the lure of mistletoe and grateful for the overall permeating holiday spirit, but without holly to bring that extra cheer and warmth, we are lost—for at Christmas, holly is a *must*.

AFA OFFICERS FOR 1951 NOMINATED

Election ballots for The American Forestry Association's 1951 slate of officers are now in the mail to all members and must be returned to AFA headquarters by December 31. The slate includes the following names as nominated by the Committee on Elections:

For President: **D. C. Everest,** of Wisconsin, Chairman of the Board, Marathon Corporation.

Directors for three years: **Samuel T. Dana,** Michigan, dean, School of Natural Resources, University of Michigan; **Chester C. Davis,** Missouri, president, Federal Reserve Bank of St. Louis; **George W. Dean,** Virginia, State Forester of Virginia; **George W. Merck,** New Jersey, president, Vermont Forest and Farmland Foundation, Inc.; **Edward P. Stamm,** Oregon, logging superintendent, Crown Zellerbach Corporation.

For Treasurer: **John M. Christie,** District of Columbia, assistant vice-president, Riggs National Bank.

For Honorary Vice-Presidents for one year: **Honorable Sherman Adams,** New Hampshire, Governor of New Hampshire; **Folke Becker,** Wisconsin, president, Trees for Tomorrow, Inc.; **Raymond J. Brown,** New York, editor, *Outdoor Life;* **Bryce C. Browning,** Ohio, secretary-treasurer, Muskingum Watershed Conservancy District; **Mrs. E. E. Byerrum,** Illinois, chairman, Conservation Committee, General Federation of Women's Clubs; **R. A. Colgan, Jr.,** District of Columbia, executive vice-president, National Lumber Manufacturers Association; **E. J. Condon,** Illinois, Sears Roebuck and Company; **L. A. Danse,** Michigan, General Motors Corporation, member, President's Water Pollution Control Advisory Board; **J. N. Darling,** Iowa, conservation cartoonist; **Walter E. Disney,** California, president, Walt Disney Productions, Limited; **Mrs. Malcolm J. Edgerton,** New York, chairman, Conservation Committee, The Garden Club of America; **Charles F. Evans,** Georgia, president, Society of American Foresters; **Ira N. Gabrielson,** District of Columbia, president, Wildlife Management Institute; **Henry S. Graves,** Connecticut, dean emeritus, Yale School of Forestry; **Walter R. Humphrey,** Texas, editor, *The Fort Worth Press;* **Lee Muck,** District of Columbia, Department of the Interior; **A. C. Spurr,** president Monongahela Power Company; **Paul E. Tilford,** Ohio, executive secretary, National Arborist Association, Inc.; **E. W. Tinker,** New York, executive secretary, American Paper and Pulp Association; **George C. Waldo,** Connecticut, editor, *The Bridgeport Post and Telegram;* **William P. Wharton,** Massachusetts, president, National Parks Association.

Members of the Committee on Elections for 1951 are: **George A. Garratt,** of Connecticut, Chairman; **Clint Davis,** of the District of Columbia, and **Alf Z. Nelson,** of New Hampshire.

AUTHORS

ROBERT BLUMENSTEIN (*Wood and Your Shoes*) is wood technician with the Timber Engineering Company Laboratory, Washington, D. C. **CHARLES E. BOOTH** (*Evergreens Forever*) headquarters at Manchester, Connecticut. **C. FRANK BROCKMAN** (*Washington's Stone Woodpile*) is with the College of Forestry at the University of Washington, Seattle. **NELSON H. FRITZ** (*Harvest Time for Holly*), a traveling forester, was at one time district forester for the Eastern Shore section of Maryland where he assisted in establishing the certified holly program. **HARRY LEE HOFFMAN III** (*The Romance of Firewood*) is a writer and tree farmer of Ivy Hill Forest, Cockeysville, Maryland. **DOROTHY M. MARTIN** (*Foresters, Fair*) is with the Division of Information and Education, U. S. Forest Service.

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November found your director in Texas, the first trip to the Lone Star State since 1948, meeting many friends with whom he was so pleasantly associated for more than a decade.

The trip started at Houston as a guest of life member W. E. Merrem, president and general manager of the Southwestern Settlement and Development Corporation, America's largest tree farm, about which a story will appear in a future issue of *American Forests*.

There were visits far and wide in the East Texas piney woods and meetings with freinds at Texas A & M College and the Texas Forest Service. In Lufkin, your director spoke at the annual meeting of the 35-year-old Texas Forestry Association and met with their executive committee to work on plans for a cooperative project with AFA.

Forestry school students, some 85 of them from six universities who attended AFA's 75th anniversary meeting in Wisconsin, are still writing us about the wonderful experience. They all seemed impressed with meeting and hearing so many big leaders in American forestry. We're glad these future foresters could be with us.

Five graduate students of New York State College of Forestry stopped by with Professor Paul F. Graves to learn more about AFA and its activities. The group was on a two-day visit to Washington checking up on the forestry activities stemming from the nation's capital.

Admiral and Mrs. Paul Pihl, AFA members from Bluemont, Virginia, were among our many other guests here. The Pihls have a tract of timber in Clark County and were discussing with us some of their problems in trying to control brush. The staff always has the door open at 919 17th Street for members. Drop in to see us.

U. S. Chamber of Commerce's natural resources department manager, David J. Guy, is recommending that local chambers of commerce help organize community volunteer forest fire protection crews as a means of meeting labor shortages in regular fire fighting crews during the present emergency. This is a worthy cause. We saw the good work done by these volunteers during World War II.

George W. Burckhardt, AFA member from Milwaukee, is really steamed up about our organization and believes other members can help swell our ranks. He writes:

"*American Forests* is without question one of the most important and readable magazines in America. Our membership deserves to be many times greater than it is. Too many who would be genuinely interested don't know about us. That is a challenge to every member."

Mr. Burckhardt followed up by nominating eight friends.

His sentiments are right to the point. AFA's members are its best conservation salesmen. Christmas is an excellent time for each AFA'er to give a friend a real year-long gift membership.

Birthday congratulations: To the Society of American Foresters

THE AMERICAN FORESTRY ASSOCIATION

A. C. Spurr • *President*

Samuel T. Dana • *Vice-President*

Randolph G. Pack • *Vice-President*

S. L. Frost • *Executive Director*

John M. Christie • *Treasurer*

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BOARD OF DIRECTORS

Bryce C. Browning, 1950—Ohio, Muskingum Watershed Conservancy District.

W. J. Damtoft, 1952—North Carolina, Southern Pulpwood Conservation Association.

Samuel T. Dana, 1950—Michigan, School of Forestry and Conservation, University of Michigan.

C. H. Flory, 1950—South Carolina, Association of State Foresters.

Karl T. Frederick, 1952—New York, New York State Conservation Council.

William B. Greeley, 1951—Washington, West Coast Lumbermen's Association.

Don P. Johnston, 1952—North Carolina, North Carolina Forestry Association.

Kent Leavitt, 1951—New York, National Association of Soil Conservation Districts.

George W. Merck, 1950 — New Jersey, President, Vermont Forest and Farmland Foundation, Inc.

Walter H. Meyer, 1951 — Connecticut, Yale School of Forestry.

Randolph G. Pack, 1952 — New York, Charles Lathrop Pack Forestry Foundation.

Lloyd E. Partain, 1951 — Pennsylvania, The Curtis Publishing Company.

Theodore S. Repplier, 1951—District of Columbia, The Advertising Council, Inc.

James J. Storrow, 1952 — New Hampshire, Society for the Protection of New Hampshire Forests.

William P. Wharton, 1950—Massachusetts, National Parks Association.

and the Yale School of Forestry on their 50th anniversaries; to the North Carolina Forestry Association on its 40th, and the Texas Forestry Association on its 35th. Also congratulations to the West Virginia Pulp and Paper Company on its new 340,000-acre tree farm dedicated in South Carolina in November.

Lee E. Emerson, Republican nominee for Governor in Vermont, we note, had quite a platform for forestry in his campaign. He recommended:

"A. Survey by town officials and report to State Forestry Department of idle town lands suitable for reforestation.

"B. More municipal forest planting.

"C. Further acquisition by the State of waste or denuded lands unfit for farming, with a view to their reforestation if private or municipal plantings on the same will not be provided for.

"D. Further education along good forest cutting and planting lines, uniform tax practices on timber lands and survey by Forestry Department as to how law relating to reseeding has worked out, with a view to its further implementation if necessary."

New films: "Watershed Fire," a 15-minute sound color movie on fire, forests and water in California. Information on it may be obtained from DeWitt Nelson, State Forester, Sacramento 14, California.

The AFA staff, posing behind the section of giant California redwood which graces its Washington office, wishes you Season's Greetings

New Life Members: Miss Mabel B. Fritsch of Pennsylvania, Charles C. Haines of California, Dr. M. D. Houghton of Massachusetts and Harry H. Webb of Vermont.

The Louisiana Forestry Commission, the State Department of Education and Louisiana State University are to be congratulated on their new teacher's manual, "Behind the Curtain of Green." An outline for Louisiana's first organized forestry education program, the 112-page book was written by eight teachers after several months of intensive research. Prepared for grades one through twelve, its central theme is the development of an appreciation for what trees and forests mean to the people of Louisiana.

Fifteen thousand surplus copies of old issues of *American Forests* Magazine have been donated to the United Book Exchange by the AFA.

American Forests will be sent to any foreign library requesting it under this plan.

S.L.F.

HONORARY VICE-PRESIDENTS

W. C. Bailey—Tennessee, President, First National Bank, Clarksville.

Folke Becker—Wisconsin, President, Trees for Tomorrow, Inc.

Hon. Charles F. Brannan—District of Columbia, The Secretary of Agriculture.

Raymond J. Brown—New York, Editor, *Outdoor Life.*

Mrs. Le Roy Clark—New Jersey, Chairman, Conservation Committee, The Garden Club of America.

Donald Comer, Sr.—Alabama, Chairman of the Board, Avondale Mills.

Dr. Wilson Compton—Washington, President, Washington State College.

E. J. Condon—Illinois, Director of Public Relations, Sears, Roebuck and Company.

L. A. Danse—Michigan, Member President's Water Pollution Control Advisory Board.

Walter E. Disney—California, President, Walt Disney Productions, Ltd.

Aubrey Drury—California, Secretary, Save-the-Redwoods League.

Walter E. Humphrey—Texas, Editor, *Fort Worth Press.*

Joseph F. Kaylor—Maryland, President, Association of State Foresters.

Miss Ethel L. Larsen—Michigan, Chairman, Conservation of Natural Resources Committee, General Federation of Women's Clubs.

George Houk Mead—Ohio, Member, National Citizens Commission for the Public Schools.

Hon. Leslie A. Miller—Wyoming, Chairman, Committee on Natural Resources Commission on Organization of the Executive Branch of the Government.

W. A. Roberts—Wisconsin, Vice-President, Allis-Chalmers Manufacturing Company.

Dr. Paul E. Tilford — Ohio, Secretary-Treasurer, National Arborist Association, Inc.

William Vogt—District of Columbia, former Chief, Conservation Section, Pan American Union.

Edward A. Wayne—Virginia, Vice-President, Federal Reserve Bank of Richmond.

Vertrees Young — Louisiana, Vice-President, Gaylord Container Corporation.

THE STAFF

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Dorothy Dixon—*Trail Riders*

Dorothy Wright—*Membership Department*

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Editorial

RECREATION'S ROLE IN CONSERVATION

The cause of forestry and natural resource conservation received encouragement recently from a new and welcome ally—the National Recreation Policies Committee, an independent group of professional leaders in recreation and allied fields whose members are nominated by their respective professional, national organizations.

Within the framework of this committee's Mid-century Declaration of Recreation Policy, adopted in October at Cleveland, Ohio, was a list of 17 measures and needs it deems necessary to fulfill if future requirements for recreation and use of leisure hours are to be met. Prominent in the list was: "Continued conservation of the natural resources of the nation, which may be utilized as one of their highest purposes for qualitative recreation for all the people. These resources include our forests, mountains, waterways, beaches, places of inspiring beauty, historic sites and wildlife."

It is entirely logical and fitting, of course, that conscientious planners of a wholesome program of recreation should be concerned with natural resources and their conservation. The reverse is also true, for in comparatively recent years conservationists have united behind a doctrine of multiple land use, one facet of which recognizes recreational pursuits as the primary function of certain land areas.

Elsewhere in its Policy, the committee stated, "In this age of industrial organization and high specialization for the majority of people, recreation becomes more important as a means of creative living. Man now becomes acquainted with his natural environment more through recreation than through the necessities of survival."

Outdoor recreation does, indeed, offer the vast majority of work-a-day man his closest and most satisfying contact with nature. And there is a wealth of evidence supporting man's desire to escape for a time the harried pressure of present day living in favor of communion with nature. Facilities at our national parks and monuments and in our national forests are taxed to capacity each year. State parks and private retreats are in similar demand. Introduction to the inspirational beauties of one area whets the visitor's appetite to explore elsewhere—and in the process he is exposed first-hand to other needs for conservation.

What better way could there be for popularizing and humanizing conservation's all-important multiple land use theme? Widespread realization of the importance of our natural resources and a willingness to take active part in their conservation is driven home most easily and painlessly through a humanized approach and a concrete illustration of the benefits which can accrue to the individual. Certainly one would find it difficult to appreciate what all the clamor was about if he remained always within the tree-less, steel-and-concrete portions of Manhattan.

Need we be reminded that some of our most energetic and forceful champions of conservation live by necessity in those same man-made caverns of New York City, or in other large cities of the nation? In some cases, their interests in natural resources were aroused while pursuing recreation in the great outdoors. Once awakened, these city dwellers are often more zealous than those who live closer to nature or make their livelihood directly from natural resources. They appreciate more keenly the bounties of nature.

Yet, too often we lose sight of the broad picture. Perhaps it is because forestry in the early days was regarded chiefly from the standpoint of adequate timber supplies. The multiple use concept is of more recent vintage, and we are often guilty of failing to put our cause in the most favorable light. Interest in forestry fans out like the ripples on still water in which a pebble has been thrown when people are reminded of its importance in preventing erosion and floods, in stabilizing ground water supplies, in wildlife management and, of course, in outdoor recreation.

Thus we are particularly happy to have the National Recreation Policies Committee include a plea for natural resource conservation in its assessment of needs for future recreation requirements. The people its leaders lure to outdoor recreation will most surely benefit from a more abundant life and enjoyment of leisure. And in reaping those rewards, they in turn will be exposed to the job still to be done in conservation.

All this does not, of course, advocate a recreational approach as the complete answer to solving the nation's conservation problems. But surely it is important if it can serve to open the door so that millions of Americans may come face to face with the problems involved in protection of timberlands from fire, reforestation, erosion and flood control, and watershed and wildlife management.

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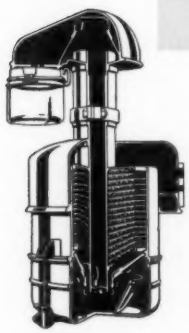

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